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(FORM UPDATED: 08/11/2010)

WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2009-10

(session year)

Senate

(Assembly, Senate or Joint)

Committee on Environment...

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
 - (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
 - (**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

* Contents organized for archiving by: Stefanie Rose (LRB) (September 2013)

Senate

Record of Committee Proceedings

Committee on Environment

Senate Bill 632

Relating to: control of nonpoint source water pollution in certain areas with carbonate bedrock and granting rule-making authority.

By Senators Hansen, Miller, Sullivan, Taylor, Coggs and Risser; cosponsored by Representatives Black, Pasch, Sinicki, Berceau, Mason and Milroy.

March 18, 2010 Referred to Committee on Environment.

March 23, 2010 **PUBLIC HEARING HELD**

Present: (5) Senators Miller, Jauch, Wirch, Kedzie and Olsen.
Absent: (0) None.

Appearances For

- Jennifer Giegerich, Madison — Wisconsin League of Conservation Voters
- Charles Wagner, Luxemburg — Himself
- Dave Hansen, Green Bay — Senator, 30th Senate District
- Bill Hafs, Green Bay — Brown County
- Denny Caneff, Madison — River Alliance of Wisconsin
- Eugene McLeod, Chilton — Himself
- Brian Forest, Sturgeon Bay — Door County
- Heather Mueller, Milwaukee — on behalf of Judy Trembl
- Jennifer Nelson, Steuben — Herself
- Elaine Swanson, Pickett — People Empowered to Protect Rosendale
- James Kerler, Lake Mills — Sierra Club
- Kelvin Rodolfo, Viroqua — himself
- Jessica Lindner, Madison — herself
- Julian Zelazny, Madison — Wisconsin Land & Water Conservation Association

Appearances Against

- Laurie Fischer, Oneida — Dairy Business Association

Appearances for Information Only

- Kathy Pielsticker, Madison — DATCP
- Jim Vandenbrook, Madison — DATCP

Registrations For

- Kevin Colson, Madison — himself
- Jerre Duerr, Oxford — himself
- Gloria Duerr, Oxford — herself
- Dennis Grzezinski, Milwaukee — himself
- William Lynch, Milwaukee — himself
- Anne Sayers, Madison — Wisconsin League of Conservation Voters
- Ezra Meyer, Madison — himself
- Melissa Scanlan, Milwaukee — herself
- Shahla Werner, Madison — herself
- Kenneth Bradbury, Brooklyn — himself
- Kerry Schumann, Madison — herself
- Joseph Syverson, Madison — himself
- Natalie Byrne, Madison — herself
- Brian Pruksa, Madison — himself
- Kimberlee Wright, Madison — Midwest Environmental Advocates
- Casey Eggleston, Madison — The Nature Conservancy
- James Saul, Madison — Midwest Environmental Advocates
- Amber Meyer Smith, Madison — Clean Wisconsin
- Lisa Conley, Oconomowoc — Town & County Resource Conservation & Development
- C. Barrie White, Wisconsin Dells — self
- Pam Kleiss, Madison — Physicians for Social Responsibility
- Karen Etter Hale, Madison — Madison Audubon Society
- Laura Payne, Cambridge — herself
- Spencer Black, Madison — Representative, 77th Assembly District
- Tom Thoresen, Fitchburg — himself
- George Meyer, Madison — Wisconsin Wildlife Federation
- Tom Stolp, Eau Claire — himself
- Susan Ecklor, Elkhart Lake — Sheboygan County Conservation Association
- Gene Ecklor, Elkhart Lake — Sheboygan County Conservation Association
- Ned Gatzke, Sparta — himself
- Carol Gatzke, Sparta — herself
- Matthew Dannenberg, Watertown — himself
- Kathleen Crittenden, Viroqua — herself
- Abigail Jackson, Pleasant Prairie — Wisconsin League of Conservation Voters

Registrations Against

- Jordan Lamb, Madison — WI Pork Association and WI Cattlemen's Assn.
- Nick George, Madison — Midwest Food Processing
- Paul Zimmerman, Madison — Wisconsin Farm Bureau
- Bob Welch, Madison — WI Corn Growers

Registrations for Information Only

- None.

April 1, 2010

EXECUTIVE SESSION HELD

Present: (5) Senators Miller, Jauch, Wirch, Kedzie and Olsen.

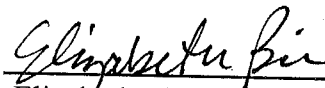
Absent: (0) None.

Moved by Senator Miller, seconded by Senator Wirch that **Senate Bill 632** be recommended for passage.

Ayes: (3) Senators Miller, Jauch and Wirch.

Noes: (2) Senators Kedzie and Olsen.

PASSAGE RECOMMENDED, Ayes 3, Noes 2



Elizabeth Bier
Committee Clerk

Vote Record Committee on Environment

Date: 4.1.10

Moved by: Miller

Seconded by: Wirch

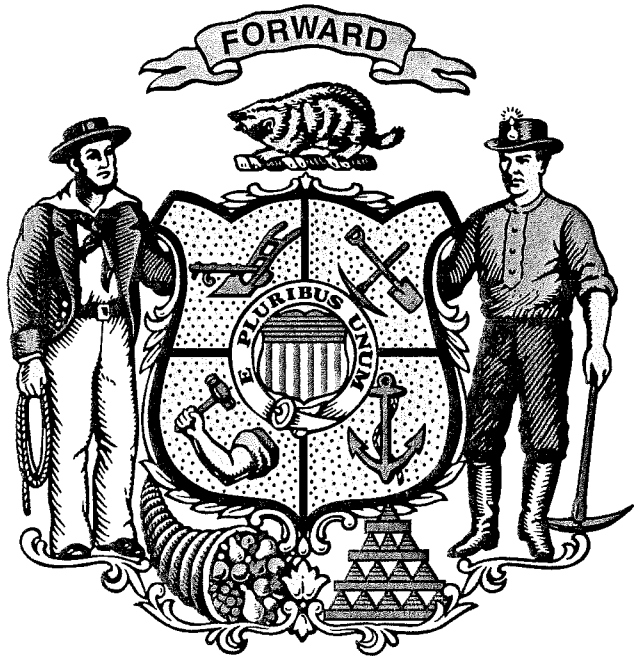
AB _____ SB 632 Clearinghouse Rule _____
 AJR _____ SJR _____ Appointment _____
 AR _____ SR _____ Other _____

A/S Amdt _____
 A/S Amdt _____ to A/S Amdt _____
 A/S Sub Amdt _____
 A/S Amdt _____ to A/S Sub Amdt _____
 A/S Amdt _____ to A/S Amdt _____ to A/S Sub Amdt _____

Be recommended for:
 Passage Adoption Confirmation Concurrence Indefinite Postponement
 Introduction Rejection Tabling Nonconcurrence

| <u>Committee Member</u> | <u>Aye</u> | <u>No</u> | <u>Absent</u> | <u>Not Voting</u> |
|-----------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| Senator Mark Miller, Chair | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Senator Robert Jauch | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Senator Robert Wirch | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Senator Neal Kedzie | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Senator Luther Olsen | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Totals: | <u>3</u> | <u>2</u> | _____ | _____ |

Motion Carried Motion Failed



**Hearing Notes
March 23, 2010**

Call Public Hearing to Order and ask Clerk to call the roll

- ROLL CALL

SB 364/AB 544, relating prohibiting the installation, sale, and distribution of wheel weights and other wheel balancing products that contain lead

- Sen. Coggs/Rep. Black

SB 632, relating to control of nonpoint source water pollution in certain areas with carbonate and granting rule-making authority

- Sen. Hansen

SB 629, relating to the sale, disposal, collection and recycling of mercury-added lamps and making an appropriation

- Sen. Jauch

SB 620, relating to groundwater management, water conservation, and granting rule-making authority

- Sen. Miller/Rep. Black

Public Hearing concludes, adjourn meeting

Executive Session Notes
April 1, 2010

Call Executive Session to Order and ask Clerk to call the roll

- ROLL CALL

Allan Jansen, of Hazel Green, as a member of the Waste Facilities Siting Board, to serve for the term ending May 1, 2012.

James Schuerman, of Wisconsin Rapids, as a member of the Waste Facilities Siting Board, to serve for the term ending May 1, 2013.

SB 557, relating to notices concerning construction near or on lakes, streams, or wetlands that are given to applicants for building permits and other construction approvals, requiring the Department of Natural Resources to furnish informational brochures about wetlands laws, requiring the Department of Natural Resources to provide evaluations and statements about whether certain land contains wetlands, and making an appropriation

Senate Amendment 1 to SB 557

- MOTION FOR ADOPTION
- SECOND
- DISCUSSION
- ROLL CALL

SB 557

- MOTION FOR PASSAGE AS AMENDED
- SECOND
- DISCUSSION
- ROLL CALL

SB 632, relating to control of nonpoint source water pollution in certain areas with carbonate bedrock and granting rule-making authority

SB 632

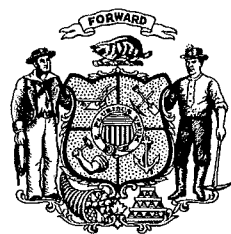
- MOTION FOR PASSAGE
- SECOND
- DISCUSSION
- ROLL CALL

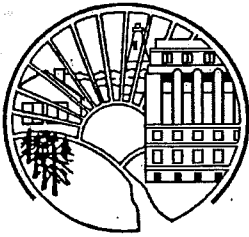
CR 09-077, relating to ensuring that lands acquired with funding from the stewardship program under ss. 23.0915 and 23.0917, Stats., are open to public hunting, trapping, fishing, hiking and cross county skiing

CR 09-077

- MOTION FOR MODIFICATION
- SECOND
- DISCUSSION
- ROLL CALL

Adjourn Executive Session





SHEBOYGAN COUNTY

Patrick Miles, County Conservationist
Land & Water Conservation Department

August 27, 2009

Senator Joseph Leibham
Room 5 South
State Capitol
P.O. Box 7882
Madison, WI 53707-7882

Dear Senator Leibham,

As local elected officials, we are often the first line of defense in protecting public health. When there are well contamination issues, local governments must immediately identify the scope and source of the problem, address the immediate threats posed, and follow-up to ensure that the threat has been sufficiently addressed. What we are not able to do as local elected officials is actively take steps to prevent future drinking water contamination when problems arise within the existing state standards. We understand that this can only be done after rigorous data collection and analysis demonstrates that this is necessary.

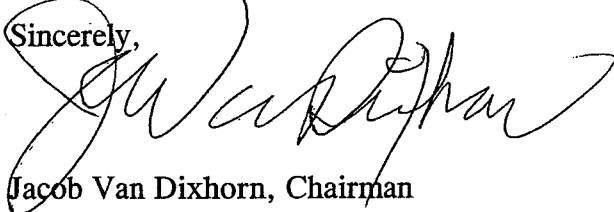
The karst topography in certain areas of Wisconsin, most notably in Door, Brown, Calumet, Manitowoc, and Kewaunee counties, has led to drinking water contamination that is above and beyond what is acceptable. When groundwater aquifers become contaminated, it is virtually impossible to clean them up again, and tracing the pollution back to the source is incredibly difficult. The best protection against the contamination of our drinking water is to prevent it in the first place. To protect public health, we believe Wisconsin must create legislation that:

- ♦ *Designates a special "management area" in Northeastern Wisconsin* to address the problem of unsafe waste disposal on land that is highly vulnerable to groundwater contamination due to geology.
- ♦ *Creates criteria to allow other counties with karst that have demonstrated water quality problems* to locally manage waste spreading.
- ♦ *Creates a new carbonate area mapping program* to make up for the lack of clear, state-wide knowledge about where the most high-risk lands can be found.
- ♦ *Strengthens and unifies waste spreading regulations* to give clarity to what are now weak and confusing land disposal regulations for various types of waste.

As the Sheboygan County Planning, Resources, Agriculture & Extension Committee, we support karst protection legislation and ask that you give us the tools and ability to address this problem. This legislation will allow all of us to assure our constituents that their drinking water will be protected no matter where in Wisconsin they live.

Thank you for your consideration of this issue.

Sincerely,

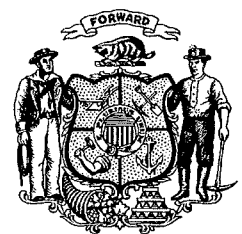
A handwritten signature in cursive script, appearing to read 'Jacob Van Dixhorn', written in black ink.

Jacob Van Dixhorn, Chairman
Sheboygan County Planning, Resource, Agriculture & Extension Committee

c: Representative Steve Kestell
Representative Terry Van Akkeren
Representative Daniel Le Mahieu



WISCONSIN STATE LEGISLATURE





Soil & Water Conservation Department

Jerry Halverson, Department Director

jerryhalverson@co.manitowoc.wi.us

Manitowoc County Office Complex • 4319 Expo Drive, P.O. Box 578 • Manitowoc WI 54220
Phone: 920.683.4183 • Fax: 920.683.5131 • TTY: 920.683.5168

March 22, 2010

To: Senate Committee on Environment
Senator Mark Miller-Committee Chair
Senator Robert Jauch
Senator Robert Wirch
Senator Neal Kedzie
Senator Luther Olsen

Re: Comments on Senate Bill 632 relating to: control of nonpoint source water pollution in certain areas with carbonate bedrock.

Dear Senators:

Safe drinking water and agriculture are vitally important to every citizen of Wisconsin. The decisions we make today will affect this generation and generations yet to come. Senate bill 632 again raises the issue as to the appropriate course to take for groundwater protection as we move forward as America's Dairyland.

The Manitowoc County Land Conservation Committee and the Soil and Water Conservation Department do not support the direction outlined in SB 632 for the following reasons:

The Wisconsin Geological and Natural History Survey {attached} identifies 38 counties in the state containing areas of carbonate bedrock with soil depths less than 50 feet. This bill selects Manitowoc County as one of five counties in the state subject to the requirements and regulations, while other counties would have the option to apply the requirements by resolution of their county boards. This gives them the opportunity to review the requirements, standards and prohibitions prior to making a decision to opt in or out, and places the decision at the county level, where it belongs. It is only right for Manitowoc County to have the same opportunity as other counties. We request that Manitowoc County be removed from the "covered counties" list.

SB 632 (16) (4) requires a county land conservation committee to categorize the land in potentially susceptible areas according to the rules for ranking those lands. This will require site specific information including field investigations and soil borings to determine soil depth over bedrock. Extensive staff time and dollars will be necessary to accomplish this requirement. If landowner permission to enter onto the land is denied, staff will be subject to trespassing laws. Entry onto land will require statutory procedures and will be subject to legal challenge. SB (16) (4) (b) 1. allows the owner of the land, DNR, DATCP, an organization, or any other person to request a county land conservation committee to review the categorization based on site –

specific information and to conduct an informal hearing on the request. The decision of the county can be further appealed to the state land and water conservation board for a decision, and the appellant may also request a contested case hearing to review the decision of the land and water board. There could potentially be thousands of site specific appeals. Reaching resolve through this lengthy process would be nearly impossible to accomplish.

SB 632 does not address the fiscal impact to state and county government for administration and enforcement of performance standards and prohibitions required by this proposed law. This unfunded state mandate would create a severe financial hardship to counties.

SB 632 (22) (2) requires the department to review and incorporate as appropriate the recommendations of the Final Report of the Northeast Wisconsin Karst Task Force. Although we respect the efforts of the Karst Task Force Committee, we disagree with many of the recommendations. A few examples of concern are:

The Task Force report recommends that no manure could be applied to frozen, snow-covered or saturated soils in areas with less than 50 feet of soil over bedrock. This recommendation would prohibit applying even one load of heavily bedded manure when these conditions exist to areas with 49 feet or less of any soil type, including clay, which is extremely impervious. Furthermore, we currently do not have site specific information on soil depth to bedrock.

Natural Resources Conservation Service (NRCS) Nutrient Management 590 is currently used state-wide to apply manure application standards and prohibitions that protect groundwater. Standard 590 provides state-wide consistency. We recommend revising this standard if deemed necessary, based upon updated scientific knowledge, as opposed to enacting SB 632.

The Task Force report recommends that no new earthen-lined manure storage facilities be allowed in areas with less than 50 feet of soil over bedrock. The task force also recommends that existing storage facilities be required to be inspected, certified, abandoned or upgraded. These recommendations would add approximately \$150,000 to concrete-line a 300 cow dairy farm's manure storage facility. SB 632 would make cost-sharing requirements in ch.281 Stats., inapplicable and therefore the burden of extra cost would rest entirely on the farmer. NRCS Waste Storage Facility Standard 313 is currently used state-wide to set standards and prohibitions that protect groundwater and should continue to be the standard used for construction of waste storage facilities.

Existing State Statute 92.15 allows a local governmental unit to enact regulations of livestock operations that exceed the performance standards, prohibitions, conservation practices and technical standards if it demonstrates to DNR or DATCP that the regulations are necessary to achieve water quality standards. Manitowoc County demonstrated this need to DNR and DATCP in the past and was granted permission to exceed standards to protect groundwater in the county. 92.15 provides an avenue for counties to address local resource concerns and should be utilized as an option to this bill.

To summarize, the Manitowoc County Land Conservation Committee and the Manitowoc County Soil and Water Conservation Department do not support SB 632. At a minimum we request that Manitowoc County be removed from the “covered county” list.

Thank you for your consideration of these comments.

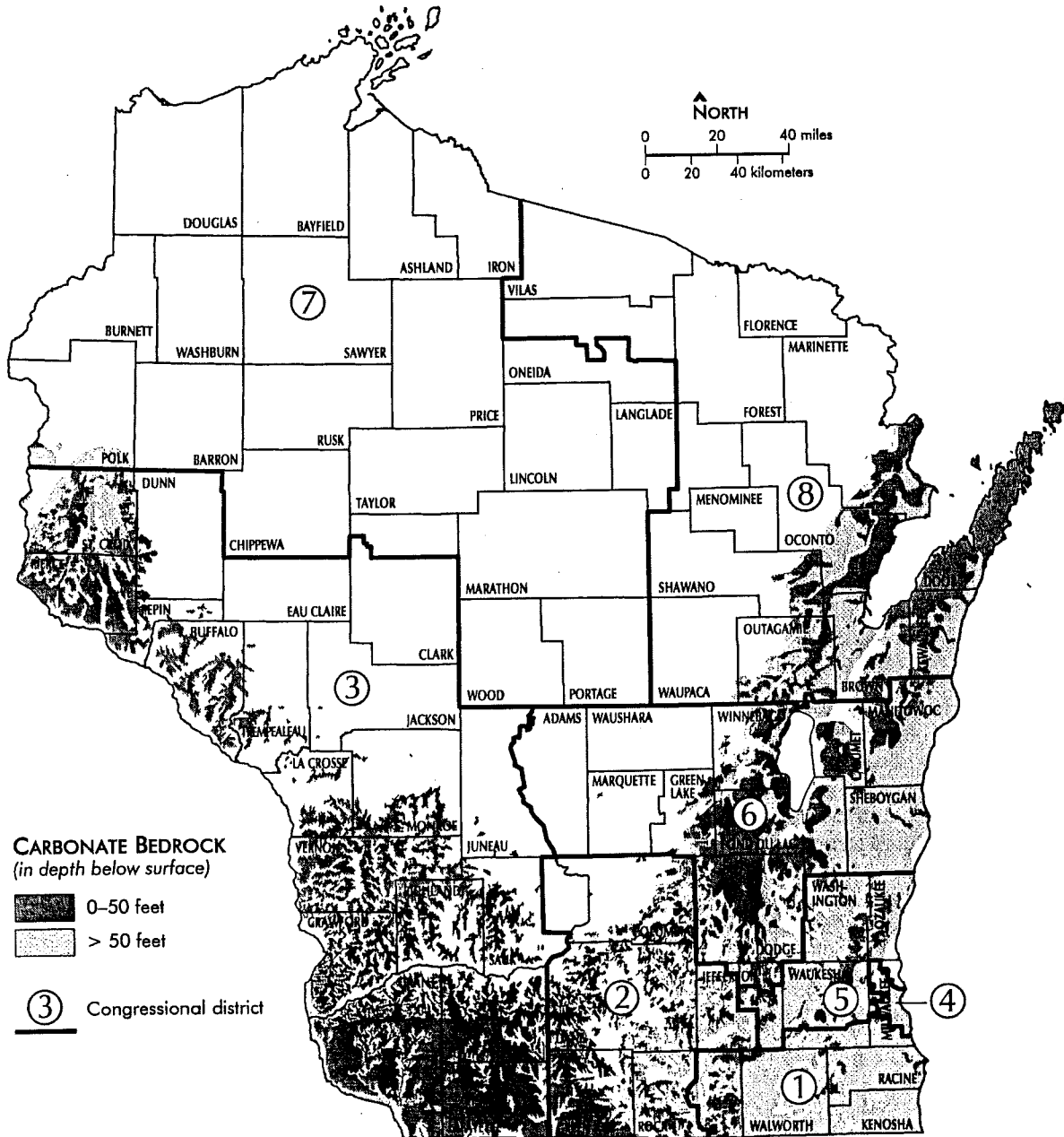
Sincerely,

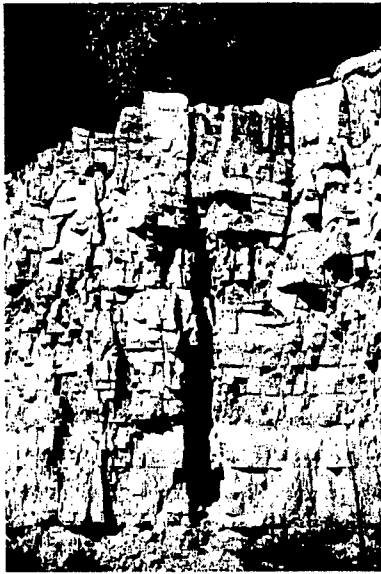
A handwritten signature in cursive script that reads "Jerry Halverson".

Jerry Halverson

Karst and shallow carbonate bedrock in Wisconsin

Areas with carbonate bedrock within 50 feet of the land surface are particularly vulnerable to groundwater contamination.





Fracturing and bedding in an exposure of carbonate bedrock near Sturgeon Bay in Door County.

Carbonate bedrock, rock formations composed primarily of limestone or dolomite, underlie the southern third of Wisconsin in a V-shaped belt (see map on other side). These rocks are commonly fractured, with the fractures providing primary pathways for groundwater movement.

Carbonate rocks are soluble, and percolating surface water can enlarge fractures to form conduits, caves, and sinkholes that are the hallmarks of a **karst** system and its related karst landscape.

In Wisconsin, karst landscapes are direct evidence of underlying shallow, fractured carbonate bedrock. But the lack of classic karst features in a landscape does not mean that shallow fractured carbonate bedrock is absent, or that the groundwater is potentially any less vulnerable to contamination.

Carbonate bedrock and groundwater contamination

Carbonate formations are important aquifers in Wisconsin. These aquifers supply water for homes, farms, cities, industries, and other human uses as well as maintaining water levels in lakes and wetlands and flows in streams and springs.

Karst and shallow carbonate bedrock in Wisconsin

Wisconsin Geological and Natural History Survey

2009

Carbonate aquifers are exceptionally vulnerable to contamination for two reasons:

- Groundwater flow in fractured rocks and karst systems can be extremely rapid—tens to hundreds of feet per day.
- Carbonate rocks are poor at filtering or otherwise removing contaminants.

Some site-specific questions to ask about carbonate aquifers

Carbonate aquifers are particularly vulnerable where overlying soils are thin or absent. There are numerous examples of groundwater contamination of carbonate aquifers in such settings in Wisconsin. Consequently, land-use activities in areas of carbonate rock must be carefully managed to avoid the release of contaminants to groundwater.

Types of questions to ask:

- Is carbonate bedrock present in the subsurface?
- How deeply is it buried? In other words, what is the thickness of the overlying material?
- What is the nature of the overlying material? For example, what is its origin, composition, grain size, etc?

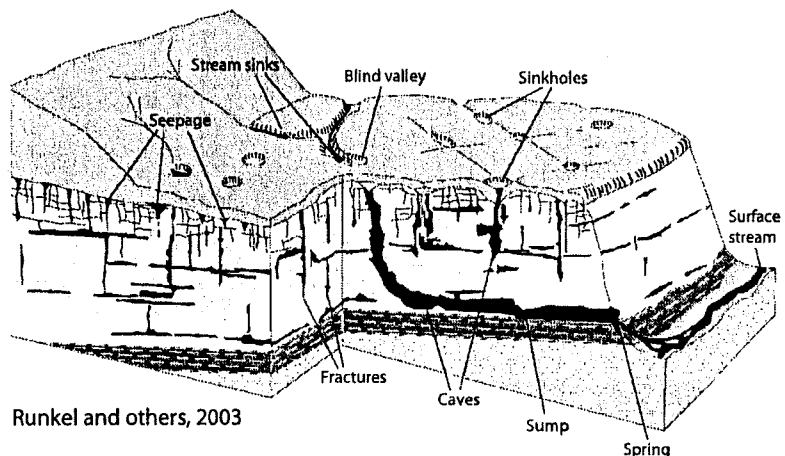
Water- and land-use management plans in areas with carbonate bedrock should always address these sorts of questions as they seek to protect groundwater quantity and quality.

For more information, contact

Kenneth R. Bradbury, Ph.D.
Wisconsin Geological and Natural History Survey
608.263.7921, krbradbu@wisc.edu



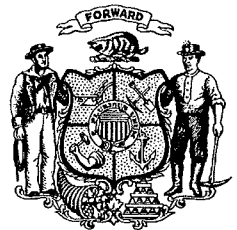
Typical features of a karst system and landscape: Seepages, sinkholes, caves, fractures, springs, and stream sinks.



Runkel and others, 2003



WISCONSIN STATE LEGISLATURE



Date: March 22, 2010

To: Senate Environmental Committee

From: Charles R. Wagner, Town of Red River, Kewaunee County

Subject: Comments in support of 2009 Senate Bill 632

I wish to thank you for providing me the opportunity to comment on SB 632. I have been working on this issue for over eight years. In December of 2001 our daughter wanted us to have our well tested to see if the water was safe for our first grandchild. I was shocked to find out that my well, drilled only four and half years earlier, was over the limit of ten parts per million for nitrates and it also had e-coli and coli form bacteria.

I contacted my well driller to see if he could help me out. He bleached the well and had it re-tested. It didn't help. The bacteria always came back in less than a week and the nitrate levels climbed to 38 parts per million.

We have continued to try many drastic measures to make our well clean itself environmentally. The WDNR Water Quality Specialist checked our well, our septic system and our surrounding acreage for possible problems. The well casing valve has been replaced. There are no longer any agricultural, commercial, industrial wastes or municipal sludge's being put on our 79 acres of land. I found an old hand dug well on the property and had it professionally sealed.

The well has been bleached 15 times. We have had the well tested over 20 times. The results very but never get good enough to pass for a "clean well". We can not pass a well test with our water! Some of the latest testing has shown three different types of bacteria and the nitrate levels have come down some but remain in the high teens.

We have resorted to using only bottled water for all of our drinking and cooking needs. We purchase one gallon and five gallon jugs. We have had to purchase and install a water dispenser in our dining room. We have to caution all company to not drink the water. There are times of the year when I can not in good conscience give the water to my dogs. We can not us the ice maker in our refrigerator. We brush our teeth the old fashioned way, with a glass of bottled water.

What is the cause of this problem? No one likes to have the finger pointed at them when it comes to placing blame. But in Kewaunee County 78% of all of the land mass is used for farming. Just look around. Any reasonable person would come to the same conclusion that farming is having a very large impact on our groundwater.

I have been on the Kewaunee County Board of Supervisors for over ten years. I have been on the Land and Water Conservation Committee for six years. Three years ago I ran for a position on the Wisconsin Land and Water Conservation Board and was re-elected in 2008. I was successful in getting that board to review the Feb 2007 Karst Task Force Report. The board also held a karst forum to hear from the public on this issue.

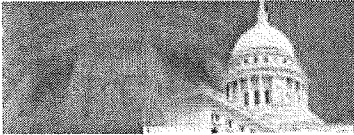
In the past two years I have been working with a group of people from around this state to put together the groundwork for this legislation. It has taken us a very long time to get to this point.

The "Karst Bill", which is what this legislation has become known as will help our county's work with farmers, commercial waste haulers and other nutrient producers to manage these waste products in a much better way to make sure we are applying them in the right amounts, in the right places and at the right time of the year. It's very important to understand that farmers will be included in the process to develop better standards and prohibitions for dealing with these wastes. There is no place in the legislation where we imply that farmers will go out of business. Farming is a very important part of our economy in this state. Farmers are the only business which is helping to protect our "green space".

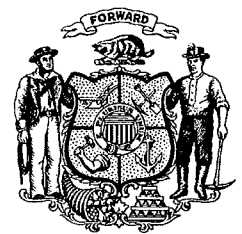
This legislation will put the control of these wastes more at the local level. Some will say we need to have all in-compassing legislation to level the playing field. But the land in this state is not level! The topography in this state changes dramatically. In the karst areas these changes can happen quickly. A good practice in one field may not be the best thing to do in the next field over. We need this legislation and we need it now!

Thank you again for allowing me to voice by support for Senate Bill 632.

Charles R. Wagner.



WISCONSIN STATE LEGISLATURE





Wisconsin Land and Water Conservation Association, Inc.

702 East Johnson Street · Madison, Wisconsin 53703-1533

Phone: (608) 441-2677 · Fax: (608) 441-2676 · Web site: www.wlwca.org

Senator Mark Miller
Chairman
Senate Environment Committee
State Capitol
Madison, Wisconsin 53703

22 March 2010

Dear Senator Miller

Thank you for co-sponsoring SB 632. I am writing to urge your committee members to **vote yes on SB 632**.

WLWCA is a not-for-profit conservation organization, which represents the County Land Conservation Committees. Our mission is to assist county Land Conservation Committees and Departments with the protection, enhancement and sustainable use of Wisconsin's natural resources. At the annual meeting of our membership in 2007, a resolution was passed endorsing the findings of the Northeast Wisconsin Karst Task Force. In 2008, a resolution was passed asking for the establishment of management areas associated with karst geology.

Karst is a term that refers to carbonate bedrock that is porous or fractured. When karst geology is present under thin soils there is an enhanced risk that waste that is land-applied as a fertilizer will flow through the bedrock into the groundwater. Sources of waste could be many, such as manure, septage, municipal sludge or other organic waste. In each case, land application of the waste in a vulnerable area can lead to dangerous well contaminations. At WLWCA we are very concerned about a public health crisis that exists right now in Northeast Wisconsin. Fellow Wisconsinites are turning on the faucets in their homes and, instead of clean drinking water coming from their well, they are delivered brown, contaminated water. Others are drinking from their well under the impression that the water is clean, only to become ill from the excess bacteria or nitrate content.

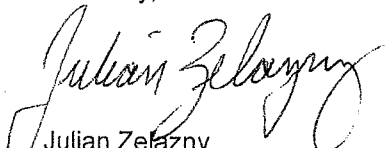
The need is urgent. This is a public health issue. In Calumet County a well testing program conducted from 2002-2005 showed that fully half the wells tested were out of compliance for bacteria, nitrates or both. There are many other examples. In the Brown County town of Morrison 21% of the wells tested in a 2006 test for bacteria showed elevated levels of coliform bacteria. Twelve of those wells were positive for E. Coli.

The bill before you now is a reasonable approach to a complex problem. The aim is to reduce the risk of groundwater contamination by a thorough examination of the extensive data, currently available, on bedrock and soils, then ranking the vulnerability of the site. Based upon the risk, certain best management practices would be prescribed in order to reduce the probability of well contamination. By reducing the risk of well contamination, public health can be protected and land owners can be confident that their land spreading practices are unlikely to cause any contamination to wells.

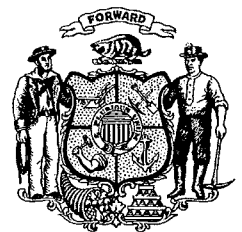
We believe that SB 632 will provide reasonable measures to address a very real and current problem in Northeast Wisconsin. We urge the members of the Senate Environment Committee to **vote yes on SB632**.

If you or any members of your committee should have any questions for WLWCA on this or any other soil and water conservation issue please do not hesitate to contact me.

Sincerely,



Julian Zelazny
Executive Director.



March 23, 2010

Dear Members of the Senate Environment Committee,

Clean drinking water is essential for protecting public health. Many Wisconsin families are dependent on groundwater to supply their drinking water. Unfortunately, all too frequently, our groundwater can be contaminated with pollution that can make people sick when waste is carelessly handled, poorly treated, and applied to land in dangerous quantities.

In large parts of Wisconsin, especially in karst areas, the land above our groundwater is quite porous. When manure or industrial sludge is spread on that land, it can get into cracks and sinkholes in the ground that act as direct tunnels to our drinking water. This groundwater pollution contains two common – and highly hazardous – pollutants found in land-applied waste: bacteria and nitrates. *Bacteria* and other harmful pathogens often found in manure, septic sludge, and other human and animal wastes can cause infections, gastroenteritis, and other serious health problems. *Elevated nitrate levels* in drinking water can interfere with the ability of hemoglobin in red blood cells to carry oxygen, resulting in Blue Baby Syndrome for infants less than six months of age. For this reason, infants under a year and breast feeding and pregnant women should not drink water with elevated nitrate levels.

Unfortunately, Northeastern Wisconsin has a long history of groundwater contamination that studies have linked to careless waste disposal practices. For the period from 2002 through 2005, for instance, water sampling in Calumet County showed that almost half of all private wells had unsafe levels of bacteria, nitrates, or both. More than 30 percent of wells in certain townships in Calumet, Brown, and Kewaunee Counties exceed state drinking water standards for nitrates, and high-profile contamination events in the communities of Wayside, Morrison Luxemburg, and Cooperstown have captured public attention and drawn cries for help from concerned homeowners.

When groundwater aquifers become contaminated, it is virtually impossible to clean them up again, and tracing the pollution back to the source is incredibly difficult. The best protection against the contamination of our drinking water is to prevent it in the first place. To protect public health, Wisconsin must create legislation that:

1. *Designates a special "management area" in Northeastern Wisconsin* to address the problem of unsafe waste disposal on land that is highly vulnerable to groundwater contamination due to geology.
2. *Creates criteria to allow other counties with karst that have demonstrated water quality problems* to also locally manage waste spreading.

3. *Creates a new carbonate area mapping program* to make up for the lack of clear, state-wide knowledge about where the most high-risk lands can be found.
4. *Strengthens and unifies waste spreading regulations* to give clarity to what are now weak and confusing land disposal regulations for various types of waste.

As health professionals, we ask that you support these proposals.

Thank you for your consideration of this issue.

Sincerely,

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Madison

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Eau Claire

Ann Behrmann, MD
Madison

Sara John, RN
Eau Claire

Carol Bess, RN BSN
Green Bay

Rebecca Johnson, CNA
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Richard Dart, MD
Maiden Rock

Pam Kleiss, Director
Physicians for Social Responsibility, Madison

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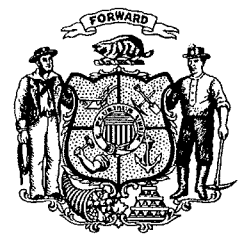
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RIVER ALLIANCE of Wisconsin

River Alliance Comments on SB 632

Relating to control of nonpoint source water pollution in certain areas with carbonate bedrock

March 23, 2010

We urge the Senate Environment Committee's support of SB 632, a bill intended to protect the drinking water of northeastern Wisconsin and other areas of the state vulnerable to contamination because of "karst" geological features in those places.

It is time to act on this issue. In Calumet County alone, water sampling is showing that two thirds of wells in areas of the county vulnerable to contamination because of karst features are considered unsafe to drink from because of the presence of either nitrates or bacteria. Brown County was the subject of a pretty unflattering New York Times article last September that read like something you'd expect from Appalachia and not Wisconsin.

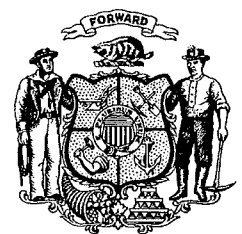
1. First and foremost, this bill is intended to protect public health. Private wells have consistently been contaminated for at least the past 10 years from land-spread wastes, but karst area vulnerability was demonstrated over 20 years ago when pesticides were found in drinking water in Door County in the 1980s.
2. The bill is unique in agricultural land use policy, in that it customizes recommended farming practices to the unique landscape and geology of a particular area. Too often, agricultural land use policy is "one size fits all," and does not consider the idiosyncracies of locality and geology.
3. Ultimately, certain practices or prohibitions will have to be developed to minimize or eliminate the possibility of well contamination from land-spread wastes. The legislation calls for that process to be developed and driven locally, by people who know the area best – farmers, conservation professionals, and scientists with expertise in hydrology and hydro-geology. This problem is not merely an agronomic one – it will require broad-based expertise to address it, but that expertise resides in the region.
4. This proposal is derived from good homework done on this issue over 3 years ago. The first recommendation of the Northeast Wisconsin Karst Task Force, whose report was completed in February of 2007, was to establish a "carbonate bedrock management zone" for the five northeastern Wisconsin counties to create a framework for multi-county cooperation and local efforts." The Task Force

We Save Rivers

recognized this work couldn't be done piecemeal by a county here and a county there, and that it should be driven locally.

5. The proposed legislation will NOT affect every farmer and every acre of farmland in these five counties. The bill will enable mapping of the area that will show those places most vulnerable to groundwater contamination from land-spread wastes.
6. The bill will also enable a really good recommendation of the Karst Task Force – that is, to rank or score those areas by how vulnerable they are to contaminating drinking water. So, for example, if you had a field with a sinkhole at the bottom of a sloping field, that would be probably be pretty vulnerable and would be ranked high. If you have a flat field with some fissures (cracks) in the bedrock but with 30 feet of topsoil over it, that would probably be ranked low.

Denny Caneff
Executive Director





KEEPING THE
COWS IN WISCONSIN™

Date: March 23, 2010

To: Chairman Senator Miller and Members of the Senate Committee on Environment and Natural Resources

From: Laurie Fischer, Dairy Business Association of Wisconsin Executive Director
David Jelinski, Dairy Business Association of Wisconsin Government Affairs Director

Re: Opposition to Senate Bill 632

Good morning, Chairman Miller and members of the Senate Committee on Environment and Natural Resources. Thank you for allowing me the opportunity to speak to you today regarding Senate Bill 632 (SB 632). My name is Laurie Fischer and I am the Executive Director for the Dairy Business Association (DBA) of Wisconsin.

DBA is a statewide organization that represents 760 members involved in the dairy industry in Wisconsin, including farmers, their local vendors such as feed mills, farm supply businesses, and dairy professionals. The dairy industry is a \$26 billion dollar industry in Wisconsin and employs tens of thousands. DBA works to keep Wisconsin farmers competitive in a global economy; is also involved in the development of consistent water, environmental and waste management regulation; and actively works to assure that dairy producers remain a thriving part of Wisconsin's economy. On behalf of our membership, DBA urges the Senate Committee on Environment and Natural Resources and the legislature to oppose SB 632 because the bill will remove jobs, is unnecessary and redundant. State agencies currently lack a sufficient scientific basis upon which to regulate as the legislation would require, and the bill would result in additional economic pressure on the already struggling agricultural industry in Wisconsin.

The proposed legislation is unnecessary and in fact redundant on two levels. First, appropriate nutrient management standards already exist. Second, local governments already have the ability to impose more stringent standards based on local conditions. Currently, nutrient management planning standards in NRCS 590 and non-point runoff standards in NR 151 contain provisions designed to protect surface and groundwater resources. Such provisions include setbacks from wetlands and wells and other conduits to groundwater, including sinkholes and other "sensitive areas." In addition, NR 243, the regulation for large confined animal feeding operations (CAFOs), provides even more stringent nutrient management restrictions, including the prohibition against landspreading where there is less than 24" of separation to groundwater or bedrock and less than 60" separation to fractured bedrock during frozen or snow covered conditions. Because NR 243 only became effective three years ago and is still being implemented, we have yet to fully understand the benefits of these additional environmentally protective provisions. Specific resource protection provisions from NRCS 590 and NR 243 are attached to this testimony. More and more cropland in the state is being managed pursuant to nutrient management plans and we are making significant progress. We should give these tools a chance to work before enacting yet another confounding layer of regulation and additional burdensome costs during the worst economic times in the history of the dairy industry.

Additionally, local units of government already have statutory authority to adopt the regulation available pursuant to the state's livestock siting law and then develop more stringent nutrient management standards in areas of local need. The citation for that authority is §§ 93.90(3)(a)(6)(b), (9)(b) and (ar)(2), Stats. The same is true in the state's existing nonpoint program, where areas of local concern can be addressed through more restrictive regulation. *See*, § 92.15(3), Stats. Therefore, this piece of legislation is unnecessary and redundant of existing authorities that already allow local bodies to act if such a need is identified.

SB 632 requires the Department of Natural Resources (DNR) to identify areas in Wisconsin that exhibit "carbonate bedrock characteristics" that *may* cause "areas to be susceptible to groundwater contamination from landspreading." If the Senate Committee on Environment and Natural Resources passes this bill as proposed, it would do so based upon the assumption that information currently available to the DNR accurately reflects bedrock and soil conditions in Wisconsin. Based upon our knowledge, existing research and data is inadequate to identify areas with such "carbonate bedrock characteristics" with any level of accuracy, as contemplated by the bill.

We do not believe the legislature should require the DNR to regulate farmers based on geologic formations and bedrock and soil characteristics, unless the legislature first requires the DNR to establish a scientific basis for such regulation. Currently, DNR is using existing soil classification survey maps developed from a hodgepodge of information – many of which are decades old – to regulate land application in areas with potential for shallow bedrock and groundwater. These maps are consistently proven to be inaccurate – not by DNR or NRCS, but by landowners and farmers. At great expense and effort landowners and farmers are forced to undertake testing that more often than not has shown that the maps the DNR is using to regulate are inaccurate. Enacting SB 632 as currently drafted simply places an additional burden on the landowner and the farmer to conduct the actual scientific research that the DNR has thus far failed to conduct.

SB 632 then requires an additional layer of bureaucratic uncertainty whereby county land conservation committees must further categorize "potentially susceptible areas" (as identified by the DNR) and restrict nutrient applications based on "factors" provided by the DNR. Again, SB 632 does not require county categorizations to be based on any scientific research or evidentiary finding. Instead, SB 632 would allow county categorizations to be finalized unless the DNR, DATCP, the landowner or any other person requests review of those categorizations based on site-specific information showing the categorization to be inconsistent with the rules promulgated by the DNR. As drafted, this process again puts the scientific and financial burden squarely on the landowner or farmer to disprove the county's categorization. As drafted, if no one challenges a county's categorization, the DNR and DATCP are required to develop nutrient application restriction maps based on the county's determinations. Indeed, a county could engage in a protectionist game whereby it could declare its lands off limits for the management of its own biosolids, based on nothing more than its own categorizations.

SB 632 also requires the DNR to incorporate recommendations from the Final Report of the Northeast Wisconsin Karst Task Force from February of 2007. The Final Karst Report was widely criticized because it focused too narrowly on impacts from land applications of manure and did not properly evaluate all potential sources of groundwater contamination, such as municipal waste treatment plants,

poorly maintained sewer mains and lateral connections, and urban and suburban runoff that can carry heavy metals. In addition, the University of Wisconsin-Extension and Discovery Farms criticized the Final Karst Report because it made recommendations based upon incomplete research. Specifically, Discovery Farms noted that more research is needed to define the distribution of sediments on the land surface and the factors that affect unsaturated flow in soils. If SB 632 is enacted as proposed, the legislature would again assume that information, conclusions and recommendations from the Final Karst Report are based on objective, scientific information. I submit to you that this is not the case. Enacting the requirement that the DNR incorporate recommendations from the Final Karst Report will result in the implementation of generally applicable rules that are not based objective scientific information, and will also result in a usurping of the DNR's own scientific process.

In closing, DBA opposes SB 632 and we strongly believe the state should focus on implementing current nutrient management standards statewide as a first priority. Existing rules must be allowed time to work as designed before any additional regulations are enacted. I thank you for the time to address the Committee.

NRCS 590

Section V. A. Criteria for Surface and Groundwater Resources

2. Nutrient Application Prohibitions

a. Nutrients shall not be spread on the following features:

- (1) Surface water, established *concentrated flow channels*, or non-harvested *permanent vegetative buffers*.
- (2) A non-farmed wetland, sinkhole, nonmetallic mine, or well.
- (3) The area within 50 feet of a potable drinking water well shall not receive mechanical applications of manure.
- (4) Areas contributing runoff within 200 feet upslope of *direct conduits to groundwater* such as a well, sinkhole, fractured bedrock at the surface, *tile inlet*, or nonmetallic mine unless the nutrients are *effectively incorporated* within 72 hours.
- (5) Land where vegetation is not removed mechanically or by grazing, except to provide nutrients for establishment and maintenance, unless necessary in an emergency situation.
- (6) Fields exceeding *tolerable soil loss (T)*. Erosion controls shall be implemented so that tolerable soil loss (T) over the crop rotation will not be exceeded on fields that receive nutrients.

b. When frozen or snow-covered soils prevent effective incorporation at the time of application and the nutrient application is allowed, implement the following:

- (1) Do not apply nutrients within the *Surface Water Quality Management Area (SWQMA)* except for manure deposited through winter gleaning/pasturing of plant residue.
- (2) Do not apply nutrients to locally identified areas delineated in a *conservation plan* as contributing nutrients to direct conduits to groundwater or surface water as a result of runoff.
- (3) Do not exceed the P removal of the following growing season's crop when applying manure. Liquid manure applications are limited to 7,000 gallons per acre. The balance of the crop nutrient requirement may be applied the following spring or summer. Winter applications shall be conducted according to Section VII. B.
- (4) Do not apply nutrients on slopes greater than 9%, except for manure on slopes up to 12% where cropland is contoured or contour strip cropped.
- (5) Do not apply N and P in the form of commercial fertilizer. An exception is allowed for grass pastures and on winter grains that do not fall within a prohibition area defined by V.A.2.

3. Nutrient Application Restrictions

- a. When unincorporated liquid manure applications (less than 12% solids) occur on non-frozen soils within a SWQMA, use Table 1 to determine maximum acceptable rates. No applications are allowed on *saturated soils*. Sequential applications may be made to meet the desired nutrient additions consistent with this standard. Prior to subsequent applications soils shall be evaluated using Table 1 or wait a minimum of 7 days.

Table 1

| Surface Texture Class ¹ | Max Application Rate <i>gal/acre</i> | | Allowable Soil Moisture Description for Applications |
|------------------------------------|---|--------|--|
| | < 30%* | > 30%* | |
| Fine | 3000 | 5000 | Easily ribbons out between fingers, has a slick feel. |
| Medium | 5000 | 7500 | Forms a ball, is very pliable, slicks readily with clay. |
| Coarse | 7000 | 10000 | Forms a weak ball, breaks easily. |

¹ Fine -- clay, silty clay, silty clay loam, clay loam
 Medium -- sandy clay, sandy clay loam, loam, silt loam, silt
 Coarse -- loamy sand, sandy loam, sand. This category also includes peat and muck based on their infiltration capacity

*Crop residue or vegetative cover on the soil surface after manure application.

b. For all nutrient applications on non-frozen soil within a SWQMA use one or more of the following practices as appropriate to address water quality concerns for the site:

- (1) Install/maintain permanent vegetative buffers (harvesting is allowed unless restricted by other laws or programs). Refer to NRCS Field Office Technical Guide (FOTG), Section IV, Standard 393, Filter Strip, or ATCP 48 for land in drainage districts.
- (2) Maintain greater than 30% crop residue or vegetative cover on the soil surface after nutrient application.
- (3) Incorporate nutrients within 72 hours leaving adequate residue to meet tolerable soil losses.
- (4) Establish cover crops promptly following application.

Section V. B. Criteria to Minimize Entry of Nutrients to Groundwater

To minimize N leaching to groundwater on *high permeability soils*, or soils with less than 20 inches to bedrock, or soils with less than 12 inches to *apparent water table*, or within 1000 feet of a municipal well, apply the following applicable management practices:

Note: A list of soils with a high potential for N leaching to groundwater is provided in Appendix 1 of the Wisconsin Conservation Planning Technical Note WI-1.1. Where sources of N are applied:

- a. No fall commercial N applications except for establishment of fall-seeded crops. Commercial N application rates, where allowed, shall not exceed 30 pounds of available N per acre.
 - b. On irrigated fields, including irrigated manure, apply one of the following management strategies:
 - (1) A split or delayed N application to apply a majority of crop N requirement after crop establishment.
 - (2) Utilize a nitrification inhibitor with ammonium forms of N.
2. When manure is applied in late summer or fall to meet the fertility needs of next year's crop and soil temperatures are greater than 50_F, apply one of the following options:
- a. Use a nitrification inhibitor with liquid manure and limit N rate to 120 pounds available N per acre.
 - b. Delay applications until after September 15 and limit available N rate to 90 pounds per acre.

- c. Apply to fields with perennial crops or fall-seeded crops. N application shall not exceed 120 pounds available N per acre or the crop N requirement, whichever is less.
3. When manure is applied in the fall and soil temperatures are 50°F or less, limit available N from manure application to 120 pounds per acre or the crop N requirement, whichever is less.

Note: The restrictions in B. 2. and 3. do not apply to spring manure applications prior to planting. The balance of the crop N requirements may be applied the following spring or summer.

4. Where P enrichment of groundwater is identified as a conservation planning concern, implement practices to reduce delivery of P to groundwater.

Section V. C. Additional Criteria to Minimize Entry of Nutrients to Surface Water

1. Where manure, organic byproducts, or fertilizers are applied:
- a. Avoid building soil test P values when possible beyond the non-responsive soil test range for the most demanding crop in the rotation. For most agronomic crops in Wisconsin, the non-responsive soil test range is 30 to 50 parts per million (ppm) Bray P-1 soil test.
 - b. Establish perennial vegetative cover in all areas of concentrated flow resulting in reoccurring gullies.
2. Develop a P management strategy when manure or organic by-products are applied during the crop rotation to minimize surface water quality impacts. Use either the *Phosphorus Index (PI)* in section a., or Soil Test Phosphorus Management Strategy found in section b. The single strategy chosen, either a. or b., shall be applied uniformly to all fields within a farm or tract.

Note: First year available N in manure applied to fields prior to legume crop establishment shall not exceed the first year's annual N removal by legumes and companion crop. See Wisconsin Conservation Planning Technical Note WI-1, Part II B.4. Available N applied cannot exceed the N need or legume crop N removal of the next crop to be grown.

- a. PI Strategy – The planned average PI values for up to an 8-year rotation in each field shall be 6 or lower. P applications on fields with an average PI greater than 6 may be made only if additional P is needed according to UWEX soil fertility recommendations. Strategies for reducing the PI, algorithms, and software for calculating the Wisconsin PI can be found at <http://wpindex.soils.wisc.edu/>.
- b. Soil Test Phosphorus Strategy – Management strategies based on soil test phosphorus may be used. Operations using this strategy shall have a conservation plan addressing all soil erosion consistent with the current crops and management or use the erosion assessment tools included with the Phosphorus Index model. In crop fields where ephemeral erosion is an identified problem, a minimum of one of the following runoff-reducing practices shall be implemented:
 - _ Install/maintain contour strips and/or contour buffer strips. Refer to NRCS FOTG, Section IV, Standard 585, Strip Cropping, and/or Standard 332, Contour Buffer Strip.
 - _ Install/maintain filter strips (NRCS FOTG, Section IV, Standard 393, Filter Strip) along surface waters and concentrated flow channels that empty into surface waters that are within or adjoin areas where manure will be applied.
 - _ Maintain greater than 30% crop residue or vegetative cover on the soil surface after planting.

Establish fall cover crops. Available phosphorus applications from all sources shall be based on the following soil test P values (Bray P-1).

- (1) Less than 50 ppm soil test P: nutrient application rates allowed up to the N needs of the following crop or the N removal for the following legume crop.
- (2) 50-100 ppm soil test P: P application shall not exceed the total crop P removal for crops to be grown over a maximum rotation length of 8 years.
- (3) Greater than 100 ppm soil test P: eliminate P applications, if possible, unless required by the highest P demanding crop in the rotation. If applications are necessary, applications shall be 25% less than the cumulative annual crop removal over a maximum rotation length of 8 years.
- (4) For land with potatoes in the rotation, total P applications shall not exceed crop removal over a maximum rotation length of 8 years if soil tests are in the optimum, high, or excessively high range for potatoes.

NR 243

243.14 (2) GENERAL REQUIREMENTS.

(b) A permittee who land applies manure or process wastewater shall land apply all manure and process wastewater in compliance with the following requirements:

1. Manure or process wastewater may not pond on the application site.
2. During dry weather conditions, manure or process wastewater may not run off the application site, nor discharge to waters of the state through subsurface drains.
3. Manure or process wastewater may not cause the fecal contamination of water in a well.
4. Manure or process wastewater may not run off the application site nor discharge to waters of the state through subsurface drains due to precipitation or snowmelt except if the permittee has complied with all land application restrictions in this subchapter and the WPDES permit, and the runoff or discharge occurs as a result of a rain event that is equal to or greater than a 25-year, 24-hour rain event.
5. Manure or process wastewater may not be applied to saturated soils.
6. Land application practices shall maximize the use of available nutrients for crop production, prevent delivery of manure and process wastewater to waters of the state, and minimize the loss of nutrients and other contaminants to waters of the state to prevent exceedances of groundwater and surface water quality standards and to prevent impairment of wetland functional values. Practices shall retain land applied manure and process wastewater on the soil where they are applied with minimal movement.
7. Manure or process wastewater may not be applied on areas of a field with a depth to groundwater or bedrock of less than 24 inches.
8. Manure or process wastewater may not be applied within 100 feet of a direct conduit to groundwater.
9. Manure or process wastewater may not be applied within 100 feet of a private well or non-community system as defined in ch. NR 812 or within 1000 feet of a community well as defined in ch. NR 811.

10. On a field with soils that are 60 inches thick or less over fractured bedrock, manure or process wastewater may not be applied on frozen ground or where snow is present.
11. Manure or process wastewater may not be applied on fields when snow is actively melting such that water is flowing off the field.
12. Where incorporation of land applied manure is required under NRCS Standard 590, the incorporation shall occur within 48 hours of application.
13. Manure or process wastewater may not be surface applied when precipitation capable of producing runoff is forecast within 24 hours of the time of planned application.

(c) Land application of process wastewater shall be included in the permittee's nutrient management plan and shall be done in accordance with the requirements of this section, except that process wastewater may be applied to frozen or snow covered ground in accordance with the requirements in s. NR 214.17 (2) to (6) instead of subs. (6) and (7). The permittee shall specify in the nutrient management plan or permit application whether process wastewater will be applied to frozen or snow-covered ground in accordance with subs. (6) and (7) or s. NR 214.17 (2) to (6).

(d) If incorporation is required under this section or the WPDES permit, the permittee shall specify the method of incorporation in the nutrient management plan.

Note: In addition to implementing practices specified in a nutrient management plan, the permittee should consider the following factors when making decisions about the timing of application and placement of manure and process wastewater on fields: the ability of the soil to absorb or otherwise hold liquids associated with manure and process wastewater based on the soil's moisture content or permeability, if snow is present on a field or the ground is frozen, the prediction of temperature increases that will likely result in sudden snowmelts or pollutant movement, upslope areas contributing runoff or snow melt to the site where applications occur, and other field conditions that may contribute to runoff events.

(e) A permittee shall identify as part of its nutrient management plan, to the maximum extent practicable, the presence of subsurface drainage systems in fields where its manure or process wastewater is applied.

(f) Subject to other restrictions on application rates in this section, the permittee shall use results of manure, process wastewater and soil analyses to determine nutrient application rates for manure and process wastewater.

Note: Under s. NR 243.19, the permittee shall conduct sampling of manure, process wastewater and soils, keep records associated with sampling and land application activities and submit reports to the department regarding the sample results and land application of manure and process wastewater.

Note: Pursuant to s. NR 243.142, the permittee is responsible for land application activities of the manure and process wastewater generated by the large CAFO, including the land application activities of contract haulers and employees.

(4) SWQMA APPLICATION RESTRICTIONS.

[NR 243.03 (66) "SWQMA" means all of the following:

- (a) The area within 1,000 feet from the ordinary high water mark of navigable waters that consist of a lake, pond or flowage.
- (b) The area within 1,000 feet from the high water mark of navigable waters that consist of a glacial pothole lake.
- (c) The area within 300 feet from the ordinary high water mark of navigable waters that consist of a river or stream or other non-lake navigable waters.
- (d) The area within 300 feet of conduits to navigable waters.]

(a) Subject to additional restrictions in subs. (6) and (7) for the winter season, a permittee shall choose and implement one of the following options whenever manure or process wastewater is applied on areas of fields within the SWQMA:

1. Not apply manure or process wastewater within 25 feet of a navigable water, conduit to a navigable water or wetland; and inject or immediately incorporate manure and process wastewater in all other areas within the SWQMA.
2. Not apply manure or process wastewater within 25 feet of a navigable water, conduit to a navigable water or wetland; and surface apply liquid manure and process wastewater in all other areas of the SWQMA provided that all of the following conditions are met:
 - a. The application is on long-term no-till ground.
 - b. The ground has 30% crop residue or more at the time of application.
 - c. The hydraulic application rate is limited to that specified in Table 3.
3. Establish a 35-foot wide vegetated buffer adjacent to the navigable water, conduit to a navigable water or wetland where there is no application of manure or process wastewater on the buffer; and comply with a practice in this subd. 3. a. or b. For the purposes of this subdivision, a vegetated buffer means a narrow, permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching navigable waters.
 - a. Inject or immediately incorporate manure and process wastewater in all other areas within the SWQMA, or
 - b. Surface apply in all other areas of the SWQMA provided the ground has 30% residue or more at the time of application and the hydraulic application rate is limited in accordance with Table 3.
4. Establish a filter strip that is a minimum of 21 feet wide adjacent to the navigable water, conduit to a navigable water or wetland; and comply with a practice in this subd. 4. a. or b. The filter strip shall be designed in accordance with NRCS Standard 393, dated January 2001. NRCS Standard 393, dated January 2001, is incorporated by reference in s. NR 243.07.

Note: Copies of NRCS Standard 393, dated January 2001 and documents referenced in this standard may be inspected at the offices of the department, DATCP, NRCS, county land conservation departments and the legislative reference bureau, Madison, Wisconsin.

- a. Inject or immediately incorporate manure and process wastewater in all other areas within the SWQMA, or

- b. Surface apply in all other areas of the SWQMA provided the ground has 30% residue or more at the time of application and the hydraulic application rate is limited in accordance with Table 3.
- 5. Not apply manure or process wastewater within 100 feet of a navigable water or conduit to a navigable water.
- 6. Implement other practices within the SWQMA that are approved, in writing, by the department provided that the permittee demonstrates pollutant reductions are equivalent to, or better than, reductions achieved by not applying manure or process wastewater within 100 feet of downgradient navigable waters or conduits to navigable waters.

Note: The Wisconsin buffer initiative may provide additional information on the proper design and use of riparian buffers to best protect water quality.

Note: Demonstrations of equivalent practices may consist of model outputs, calculations or other means of demonstrating equivalent pollutant reductions.

(b) The nutrient management plan shall specify the land application practices that have been selected and will be followed on each field to meet the requirements of this subsection. Permittees implementing practices under par. (a) 1., 2. or 4. shall demonstrate to the department how the practices provide for pollutant reductions equivalent to, or better than, reductions achieved by not applying manure and process wastewater within 100 feet of downgradient navigable waters or conduits to navigable waters.

(c) If the application rates in Table 3 apply pursuant to any of the requirements in par. (a) 2. to 4., any additional applications made to meet the allowed nutrient crop budget shall be done with a minimum of 7 days between applications, provided the soils are not saturated.

| Surface Texture Class ¹ | Max Application Rate (gallons/acre) |
|------------------------------------|-------------------------------------|
| Fine | 5,000 |
| Medium | 7,500 |
| Coarse | 10,000 |

¹ Fine – clay, silty clay, silty clay loam, clay loam
 Medium – sandy clay, sandy clay loam, loam, silt loam, silt
 Coarse – loamy sand, sandy loam, sand. This category includes peat and muck based on their infiltration capacity.

(6) SOLID MANURE WINTER RESTRICTIONS. The restrictions in this subsection apply to the land application of solid manure on frozen or snow covered ground.

(a) *Frozen ground–solid manure.* Unless prohibited under par. (c), solid manure may be surface applied on frozen ground if the manure is applied in compliance with the restrictions in Table 4 or otherwise immediately incorporated.

(b) *Snow covered ground–solid manure.* Unless prohibited under par. (c), solid manure may only be land applied to snow covered ground in accordance with the following:

1. If less than one inch of snow is present on the area where manure is to be land applied, the permittee may surface apply or immediately incorporate the solid manure.

Note: If there is less than one inch of snow on the ground and the ground is frozen, pursuant to par. (a), Table 4 restrictions must be followed when surface applying solid manure.

2. If one to 4 inches of snow is present on the area where manure is to be land applied, the permittee shall surface apply the manure in compliance with restrictions in Table 4 or otherwise immediately incorporate the solid manure.

3. If more than 4 inches of snow is present on the area where manure is to be land applied, the permittee shall surface apply the solid manure in compliance with the restrictions in Table 4. Incorporation of solid manure is prohibited.

Note: It is assumed that proper incorporation of solid manure is not achievable if more than 4 inches of snow is present at the time of application.

(c) High-risk runoff period.

1. Beginning January 1, 2008, solid manure may not be surface applied from February 1 through March 31 if any of the following conditions exist on the area of the field where the manure is to be applied:

- a. Snow is present to a depth of one inch or greater.
- b. The ground is frozen.

Note: Under the initial applicability provisions, the prohibition of surface application of solid manure during the high-risk period does not apply to an operation permitted as of July 1, 2007, until permit reissuance or modification. An exception to delaying compliance until permit reissuance or modification is if an operation is permitted as of July 1, 2007, and the permit requires compliance upon written department notification. Under par. (c), department notification may not require compliance prior to January 1, 2008.

Note: Solid manure may be surface applied at other times of the winter, or may be incorporated at other times during the winter, including high-risk runoff periods, if the application is done in accordance with pars. (b) and (c) and other land application requirements in this chapter.

(d) To meet the requirements of par. (c), a permittee may choose to stack solid manure generated at a production area location in accordance with s. NR 243.141 (1) rather than use a storage facility that meets the design requirements in s. NR 243.15.

| Criteria | Restrictions for fields With 0-6% slopes | Restrictions for fields with slopes > 6% and up to 9% | Restrictions for fields with slopes greater than 9% |
|--|--|--|---|
| Required fall tillage practice prior to application | Chisel or moldboard plow, no-till or a department approved equivalent ^A | Chisel or moldboard plow, no-till or department approved equivalent ^A | Not allowed |
| Minimum % solids allowed | 12% | > 20% | Not allowed |
| Application rate (cumulative per acre) | Not to exceed 60 lbs. P ₂ O ₅ per winter season, the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less | Not to exceed 60 lbs. P ₂ O ₅ per winter season, the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less | Not allowed |
| Setbacks from surface waters | No application allowed within SWQMA | No application allowed within 2.0 x SWQMA | Not allowed |
| Setbacks from downslope areas of channelized flow, vegetated buffers, and wetlands | 200 feet | 400 feet | Not allowed |
| Setbacks from direct conduits to groundwater | 300 feet | 600 feet | Not allowed |

^A All tillage and farming practices shall be conducted in accordance with the following requirements. 0-2% slope = no contouring required, >2-6% slope = tillage and practices conducted along the general contour, >6% slope = tillage and farming practices conducted along the contour. The department may approve alternative tillage practices on a case-by-case basis in situations where conducting practices along the contour is not possible. Allowances for application on no-till fields only apply to fields where no-till practices have been in place for a minimum of 3 years

(7) LIQUID MANURE WINTER RESTRICTIONS. The following additional restrictions in this subsection apply to the land application of liquid manure on frozen or snow covered ground:

(a) *Frozen ground-liquid manure.* Surface application of liquid manure on frozen ground is prohibited, except for an emergency situation under par. (d) or if allowed under par. (e). Injection or immediate incorporation of liquid manure is allowed on frozen ground, except if prohibited due to snow covered conditions under par. (b).

(b) *Snow covered ground-liquid manure.* Unless prohibited under par. (c) and subject to the frozen ground prohibition in par. (a), liquid manure may only be land applied to snow covered ground in accordance with the following:

1. If less than one inch of snow is present on the area where liquid manure is to be applied, surface application, injection or immediate incorporation of liquid manure is allowed.
2. If there is one to 4 inches of snow present on the area where liquid manure is to be applied, surface application of liquid manure is prohibited, except for department approved emergencies under par. (d) or if allowed under par. (e). Immediate incorporation or injection is allowed on areas where there is one to 4 inches of snow.
3. If there is greater than 4 inches of snow on the area where liquid manure is to be applied, surface application and incorporation of liquid manure is prohibited, except for department approved emergencies under par. (d) or if allowed under par. (e). Injection of liquid manure is allowed on areas where there is greater than 4 inches of snow.

(c) *High-risk runoff period.* 1. Unless there is a department approved emergency situation under par. (d), liquid manure may not be surface applied from February 1 through March 31.

Note: Prior to January 1, 2010, existing source CAFOs may surface apply liquid manure at other times of the winter. Also, during the high-risk period, liquid manure may be injected or incorporated if allowed under pars. (b) and (c) and other requirements in this chapter.

(d) *Emergency applications for liquid manure.*

1. Except as provided in subd. 3., a permittee may surface apply liquid manure on frozen or snow covered ground on an emergency basis in accordance with the restrictions in Table 5 if all of the following conditions are met:

- a. The manure is from a storage or containment facility that is designed and maintained in accordance with ss. NR 243.15 and 243.17 to provide 180 days of storage for the manure.
 - b. The application of manure is necessitated by exceedances or expected exceedances of the margin of safety level that were unavoidable due to unusual weather conditions, equipment failure or other unforeseen circumstances beyond the control of the permittee.
 - c. The permittee has notified the department verbally prior to the emergency application. Unless necessitated by imminent impacts to the environment or human or animal health, the permittee may not apply manure to a field on an emergency basis until the department has verbally approved the application.
 - d. The permittee submits a written description of the emergency application and the events leading to the emergency application to the department within 5 days of the emergency application.
2. Allowances for emergency surface applications of liquid manure do not apply to situations where a permittee has failed to properly maintain storage capacity either through improper design or management of the storage facility, including failure to properly account for the number or volume of wastestreams entering the facility, failure to empty a storage or containment facility in accordance with permit conditions prior to the onset of frozen or snow covered ground conditions or due to an increase in animal units.

Note: The allowance for emergency surface applications in compliance with permit conditions is intended to avoid more significant impacts to human health and water quality associated with uncontrolled overflows of manure storage facilities. Causes of emergency surface applications could include conditions such as prolonged storm events or early onset of frozen ground conditions that preclude applications of manure prior to the onset of frozen or snow covered ground conditions provided that the operation made all other attempts to maintain storage volume before an emergency application became necessary.

3. The permittee shall conduct emergency surface applications of liquid manure in accordance with the restrictions in Table 5. The permittee may only conduct emergency surface applications on fields that the department has approved for emergency applications, in writing, as part of a nutrient management plan. The department may approve alternate fields and impose alternative restrictions, in writing and on a case-by-case basis, if fields that meet the restrictions in Table 5 are not available at the time of the emergency application, the permittee has explored all other options identified in its emergency response plan and the application results in a winter acute loss index value of 4 or less using the phosphorus index.

Note: The winter acute loss index value is displayed under the heading “Acute Loss Frozen Soil PI” in the cropping screen of the Snap-Plus nutrient management software program.

Note: Reporting requirements for emergency surface applications are contained in s. NR 243.19.

(e) *Existing source CAFOs—liquid manure exception.* Prior to January 1, 2010, if an existing source CAFO does not have 180 days of storage for liquid manure as specified in s. NR 243.15, the permittee

may surface apply liquid manure on frozen or snow covered ground in accordance with the restrictions in Table 5 without satisfying the emergency criteria in par. (d). If a permittee does not have access to sites that meet the criteria in Table 5, the department may approve alternate sites and restrictions, in writing on a case-by-case basis as part of a nutrient management plan provided the application results in a winter acute loss index value of 4 or less using the phosphorus index. This allowance for existing source CAFOs to surface apply liquid manure on frozen or snow covered ground without satisfying the emergency criteria in par. (d) is not applicable after January 1, 2010.

Note: An existing source CAFO is defined under s. NR 243.115(1).

(f) *Frozen liquid manure.* Liquid manure that is frozen and cannot be transferred to a manure storage facility may be surface applied on frozen or snow-covered ground in accordance with the restrictions in Table 5. Surface applications of frozen liquid manure do not require prior department approval or notification provided application sites for frozen liquid manure are identified in the approved nutrient management plan. During February and March, the permittee shall notify the department if the permittee expects to surface apply frozen liquid manure more than 5 days in any one month.

Note: Applications of frozen manure under par. (f) are limited to times when the operation's manure handling system is not functioning due to very cold weather. **(8) IDENTIFICATION OF SITES.** The permittee shall submit sites that meet or are expected to meet the criteria in Tables 4 and 5 for manure and the criteria in s. NR 214.17 (2) to (6) for process wastewater to the department for review and approval as part of its nutrient management plan. In addition, the permittee shall evaluate each field at the time of application to determine if conditions are suitable for applying manure and complying with the requirements of this section. All surface applications of manure or process wastewater on frozen or snow-covered ground shall occur on those fields that represent the lowest risk of pollutant delivery to waters of the state and where the application results in a winter acute loss index value of 4 or less using the phosphorus index.

| Criteria | Restrictions for fields with 0-2% slopes | Restrictions for fields with >2-6% slopes | Restrictions for fields with slopes greater than 6% |
|--|--|---|---|
| Required fall tillage practice prior to application | Chisel or moldboard plow or department approved equivalent ^A | Chisel or moldboard plow or department approved equivalent ^A | Not allowed |
| Application rate (cumulative per acre) | Maximum application volume of 7,000 gallons per acre per winter season, not to exceed 60 lbs. P ₂ O ₅ , the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied or other phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less | Maximum application volume of 3,500 gallons per acre per winter season, not to exceed 30 lbs. P ₂ O ₅ , the following growing season's crop P ₂ O ₅ budget taking into account nutrients already applied, or other phosphorus application restrictions specified in a department approved nutrient management plan, whichever is less | Not allowed |
| Setbacks from surface waters | No application allowed within SWQMA | No application allowed within SWQMA | Not allowed |
| Setbacks from downslope areas of channelized flow, vegetated buffers, wetlands | 200 feet | 200 feet | Not allowed |
| Setbacks from direct conduits to groundwater | 300 feet | 300 feet | Not allowed |

^A All tillage and farming practices shall be conducted along the contour in accordance with the following requirements; 0-2% slope = no contouring required, >2-6% slope = tillage and practices conducted along the general contour. The department may approve alternative tillage practices on a case-by-case basis in situations where conducting practices along the contour is not possible

(9) ADEQUATE STORAGE. All permittees shall have and maintain adequate storage for all manure and process wastewater generated at the operation to ensure that wastes can be properly stored and land applied in compliance with the conditions and timing restrictions of the permit, nutrient management plan and this chapter. As part of the nutrient management plan, the permittee shall provide the department with documentation that it has adequate storage and methods of maintaining adequate storage for manure and process wastewater generated at the operation. For liquid manure, adequate storage means a minimum of 180 days of storage designed and maintained in accordance with ss. NR 243.15 (3) (i) to (k) and 243.17 (3) and (4).

(10) ADDITIONAL RESTRICTIONS. The department may require the permittee to implement practices in addition to or that are more stringent than the requirements specified in this section when necessary to prevent exceedances of groundwater quality standards, prevent impairments of wetland functional values, prevent runoff of manure or process wastewater during dry weather conditions or to address previous manure or process wastewater runoff events or discharges from a site to waters of the state that occurred despite compliance with this section and the conditions of a WPDES permit. These conditions may include additional restrictions on nitrogen and phosphorus loadings or other nutrients and pollutants associated with the manure or process wastewater, injection or incorporation requirements, restrictions on winter landspreading, distribution schedules, and other management or site restrictions. The department may also consider nutrient management conditions contained in ch. ATCP 50 as well as the following site-specific factors when developing permit conditions or reviewing and approving the nutrient management plan or any proposed amendments to an approved nutrient management plan:

- (a) Soil limitations such as permeability, infiltration rate, drainage class and flooding hazard.
- (b) Volume and water content of the waste material.
- (c) Available storage capacity and method of application.
- (d) Nutrient requirements of the crop or crops to be grown on the fields utilizing the manure.
- (e) The presence of subsurface drainage systems.
- (f) Potential impacts to waters identified as source water protection areas.
- (g) Potential impact to groundwater in areas with direct conduits to groundwater, shallow soils over bedrock, highly permeable soils and shallow depth to groundwater.