DATCP Docket No. 04-R-05
Rules Clearinghouse No. 05-013

ORDER OF THE STATE OF WISCONSIN
DEPARTMENT OF AGRICULTURE, TRADE
AND CONSUMER PROTECTION
ADOPTING RULES

The Wisconsin department of agriculture, trade and consumer protection adopts the following order to repeal ATCP 50.04(3)(f)5. to 9. and (h)2.(note); to amend ATCP 50.04(3)(d), (e), (e)(note), (f)(intro.), (f)3., (f)(note) and (g), 50.12(2)(f)(note), 50.30(2)(a)(note), 50.48(2)(a)3., 50.50(title), (2)(intro.), (2)(b), (2)(c), (2)(d)2. and (f), 50.62(3)(d) and (note), 50.78(3)(a) and (note), and ATCP 50 Appendix G; to repeal and recreate ATCP 50.04(3)(f)4. and ATCP 50 Appendices A to D; and to create ATCP 50.04(3)(dm), (dm)1.(note)and (i), and 50.50(2)(note) and (8) and (notes); relating to nutrient management on farms and affecting small business.

Analysis Prepared by the Department of Agriculture, Trade and Consumer Protection

The Wisconsin Department of Agriculture, Trade and Consumer Protection ("DATCP") currently administers nutrient management rules for farms. The rules are designed to minimize excessive nutrient applications that may cause nutrient runoff and water pollution.

This rule modifies DATCP's current nutrient management rules. This rule incorporates updated federal nutrient management standards, which are based on phosphorus as well as nitrogen. Phosphorus is a key nonpoint pollutant.

Statutory Authority

Statutory authority: ss. 93.07(1), 92.05(3)(k) and 281.16(3)(b), Stats.
Statutes interpreted: ss. 92.05(3)(k) and 281.16(3)(b), Stats.

DATCP has general authority to adopt rules interpreting statutes under its jurisdiction (see s. 93.07(1), Stats.). DATCP is specifically authorized to adopt farm conservation standards, including standards for nutrient management on farms (see ss. 92.05(3)(k) and 281.16(3)(b), Stats.).

Background

Under *current* DATCP rules (ch. ATCP 50, Wis. Adm. Code), all farmers who apply manure or commercial fertilizer to cropland (not just livestock operators) must have nutrient management plans. This requirement took effect on January 1, 2005 in certain watersheds, and takes effect on January 1, 2008 elsewhere. Under current state law, enforcement of nutrient management requirements is contingent on cost-sharing.

Under *current* DATCP nutrient management rules, a nutrient management plan must comply with all of the following requirements:

- It must be prepared or approved by a qualified nutrient management planner. A farmer may prepare his or her own plan if the farmer has completed a DATCP-approved training course within the preceding 4 years, or is otherwise qualified under current rules.

- It must identify the lands on which the operator will apply manure and other nutrients.

- It must be based on soil tests that determine the nutrient needs of the affected cropland. A soil test laboratory, certified by DATCP, must conduct the soil tests.

- It may not call for nutrient applications in excess of amounts needed to achieve crop fertility levels recommended by the university of Wisconsin (there are limited exceptions).

- It must comply with *NRCS nutrient management technical standard 590 (version dated March, 1999)*, published by the Natural Resource Conservation Service of the United States Department of Agriculture ("NRCS"). The NRCS standard specifies management practices to minimize excessive nutrient applications, and prevent pollution of surface water and groundwater.

Rule Contents

This rule modifies current DATCP nutrient management rules as follows:

Updated Federal Standard

Current DATCP rules incorporate an outdated version (March, 1999) of the NRCS nutrient management technical standard 590. This rule incorporates an updated NRCS standard (September, 2005), except that this rule does not incorporate certain portions of the new standard.

A nutrient management plan (*if required*) must adhere to the following provisions in the new standard (many, but not all, of these provisions *already apply* under the current standard):

- The nutrient management plan must consider all primary nutrients – nitrogen, phosphorus, and potassium. The older NRCS standard focused on nitrogen rather than phosphorus and potassium. Phosphorus is a key nonpoint source pollutant that many farmers have applied in excessive amounts (as reflected in rising average soil-test phosphorus levels in Wisconsin). Average soil test phosphorus levels now exceed 50 parts per million (which is excessive for most crops, according to university of Wisconsin recommendations). The new standard will limit excessive phosphorus applications.

- Nutrient applications may not exceed the amounts needed to achieve soil fertility levels recommended by the university of Wisconsin for crops in the farmer's rotation (there are some exceptions). Phosphorus and potassium needs are generally determined over a crop rotation, so that some buildup of these nutrients is permitted in anticipation of future crop needs during the rotation.

- The nutrient management plan must consider all nutrient sources, including existing nutrients in the soil, manure applications, fertilizer applications, and nitrogen from legumes. The plan must account for relevant limitations on nutrient applications -- for example, on frozen land, near water bodies, or on highly eroding fields (see below).

- Nutrient calculations must take into account the amount and timing of nutrient applications from all sources.

- Soil tests must be used to determine existing soil fertility levels (soil tests must be not more than 4 years old).

- Nutrient management plans must be updated annually (to account for relevant changes in cropping patterns, land base, nutrient applications, soil test results, etc.). Each annual update must document and consider relevant cropping patterns and nutrient applications from the preceding year.

- Manure nutrient content may be determined by laboratory analysis or from standard "book values" (see below).

- Nutrients may not run off the field during application.

- Nutrients may not be spread in certain areas, including the following:

    - Fields eroding in excess of "T-value" levels (the standard specifies acceptable methods for calculating erosion rates).
    - Surface water areas, or areas of established concentrated flow.
    - Permanent non-harvested vegetative buffers or wetlands.
    - Areas within 50 feet of drinking water wells (applies only to mechanical applications of manure).

- Areas within 200 feet up-slope of direct conduits to groundwater (such as wells, sinkholes, fractured bedrock, tile inlets or mine openings), unless the nutrients are effectively incorporated within 72 hours.

- Nutrients may not be mechanically applied to frozen or snow-covered land within 1,000 feet of a navigable lake or within 300 feet of a navigable stream. This prohibition does not apply to manure deposited by grazing animals, provided that applications do not exceed standards for nitrogen or phosphorus.

- Liquid manure may not be applied to frozen or snow-covered land at a rate of more than 7,000 gallons per acre.

- Manure may not be applied to frozen or snow-covered land at a rate that provides more phosphorus than will be used by crops in the next growing season.

- Manure may not be applied to frozen or snow-covered land that has a slope greater than 9% (12% if contour-cropped).

- Manure applications to frozen or snow-covered land must comply with supplementary local restrictions, if any, spelled out in an individual farm conservation plan agreed upon between the farmer and the county land conservation committee.

- Commercial fertilizer may not be applied to frozen or snow-covered land, except on pasture or surfaces planted in winter grains.

- A farmer must use at least one of the following practices when applying nutrients to *unfrozen* surfaces within 1,000 feet of a navigable lake or within 300 feet of a navigable stream:

  - Install or maintain permanent vegetative buffers.
  - Maintain 30% crop residue or vegetative cover on the soil surface after application.
  - Incorporate nutrients within 72 hours, leaving adequate residue so that erosion does not exceed "T-value."
  - Establish cover crops promptly following application.

- Unincorporated liquid manure (less than 12% solids) may not be applied to *unfrozen* soil, within 1,000 feet of a navigable lake or 300 feet of a navigable stream, if the soil is saturated.

- Unincorporated liquid manure (less than 12% solids) may not be applied to *unfrozen* soil, within 1,000 feet of a navigable lake or 300 feet of a navigable stream, in excess of the following applicable rates *in any single application* (farmer may apply more after 7 days):

Soil Type	Maximum Application Rate (Unincorporated Gallons Per Acre)	
	% Residue on Soil Surface ≥ 30%	% Residue on Soil Surface < 30%
Fine texture soil (clay)	5,000	3,000
Medium texture soil (loam or silt)	7,500	5,000
Coarse texture soil (sand, peat or muck)	10,000	7,000

- In order to minimize nitrogen loss to groundwater in certain sensitive areas, most crop nitrogen must be applied to those sensitive areas *after* the crop is established in the spring. Sensitive areas include areas with coarse soils, areas with less than 20 inches to bedrock or 12 inches to water table, and areas within 1,000 ft. of a municipal well (these areas are more specifically described in the Wisconsin technical note that accompanies the federal standard).

- In order to minimize phosphorus losses to surface water, a farmer must establish perennial vegetative cover in recurring gullies and, when applying manure during the crop rotation, must use one of the following strategies:

  - Maintain a phosphorus index, calculated according to the Wisconsin phosphorus index model over a maximum crop rotation period of 8 years, at or below a level of 6. A farmer must avoid phosphorus applications to fields that exceed that index level, unless UW recommendations call for additional phosphorus applications (based on soil tests and crop needs).

  - Regulate phosphorus applications based on soil tests. A farmer must limit phosphorus applications as necessary, based on soil test levels and phosphorus removal by relevant crops over a maximum crop rotation period of 8 years (the standard specifies application limits based on soil test levels).

Manure Nutrient Values

Under this rule, manure nutrient values used in a nutrient management plan must be based on one of the following:

- Standard "book values" specified in *Wisconsin conservation planning technical note WI-1(December, 2006),* a companion document to the *NRCS technical guide nutrient management standard 590.*

- Manure analyses conducted at a laboratory that meets the following standards:

  - The laboratory participates in the manure analysis proficiency program offered by the Minnesota department of agriculture or the university of Wisconsin, and provides copies of proficiency reports to DATCP upon request.

- The laboratory can perform manure analyses according to methods prescribed by the university of Wisconsin-extension in *"Recommended Methods of Manure Analysis," UWEX Publication A3769 (2003).*
- The laboratory can estimate "total" and "available" nutrient levels based on the manure tests ("available" nutrients are in a form that plants can use).

Excess Nutrient Applications

Under current DATCP rules, a nutrient management plan may not recommend nutrient applications that exceed the amounts needed to achieve fertility levels recommended by the university of Wisconsin for relevant crops. However the current rules allow certain exceptions if the planner can justify the recommended application.

One current exception allows for higher soil nutrient values caused by manure applications in prior years. This rule limits that exception, so that it only applies to manure applications in the year immediately preceding implementation of the nutrient management plan.

Current rules also permit excess nutrient applications for the following reasons:

- The farmer applies only organic nutrients (such as manure).
- Excess nutrients from organic nutrient applications will be used later in the planned crop rotation.
- Corn after corn is conservation tilled with greater than 50% residue after planting.
- Starter fertilizer is properly applied to row crops.
- The crop is irrigated.

This rule eliminates these exceptions, because these conditions are more precisely addressed in the (updated) NRCS technical guide nutrient management standard 590 (incorporated in this rule). This rule, like the current rules, permits excess nutrient applications based on special agronomic conditions documented by the nutrient management planner.

Qualified Nutrient Management Planner

Under current rules, a qualified nutrient management planner must prepare a nutrient management plan. Under this rule, a farmer is presumed to comply with nutrient management standards if the farmer follows a nutrient management plan prepared or approved by a qualified nutrient management planner other than the farmer (the planner is responsible for ensuring that the plan complies with nutrient management standards).

Current rules identify a number of ways by which a planner may be qualified. One way is to be registered as a "crop scientist, crop specialist, soil scientist, soil specialist or professional agronomist in the American registry of certified professionals in agronomy, crops and soils." This rule re-formulates this particular qualification option.

Under this rule, a person may no longer qualify by being on the American registry of certified professionals in agronomy, crops and soils. But a person may qualify by being registered as "a soil scientist by the soil science society of America, or as a professional agronomist by the American society of agronomy." This reflects a change in registration practices by the relevant professional societies.

Cost-Sharing and Initial Applicability Not Affected

This rule does *not* change the previously-established effective dates for DATCP nutrient management rules (2005 or 2008 for most croplands), nor does it change current cost-sharing requirements (enforcement of nutrient management standards is normally contingent on cost-sharing). Those effective dates and cost-sharing requirements still apply.

Under current law, some livestock operators must comply with nutrient management requirements regardless of cost-sharing. They include:

- Operators who need a "point source" pollution discharge permit (WPDES permit) from the Department of Natural Resources (DNR) under NR 243 (mainly operations over 1,000 "animal units").

- Operators who claim farmland preservation tax credits.

- Operators who need a permit, under a local manure storage ordinance, for a voluntarily constructed manure storage facility (see current ATCP 50.54(2)(b)).

- Operators who need a local permit for a new or expanded livestock facility with 500 or more "animal units," according to DATCP's livestock facility siting rule (not this rule).

Expanded Exemption for Municipal and Industrial Waste

Under *current* DATCP rules, a farmer is not required to have a nutrient management plan in any growing season if, during that growing season, the farmer *only* applies septage, municipal sludge, industrial waste or industrial by-products according to DNR rules. This rule expands the current exemption. Under this rule, a farmer is exempt from the nutrient management plan requirement under DATCP rules if the farmer *primarily* applies septage, municipal sludge, industrial waste or industrial by-products according to DNR rules.

Standards Incorporated by Reference

DATCP has incorporated the updated *NRCS technical guide nutrient management standard 590 (September, 2005)* as Appendix D to this rule. This rule incorporates the entire reprinted standard *except for the following sections:*

- Section V.D., related to additional criteria to minimize nitrogen *air emissions* and particulate *air emissions*.

- Section V.E., related to additional criteria to protect the physical, chemical and biological condition of the soil.
- Section VI, related to discretionary considerations.

This NRCS standard was published in September, 2005. Copies are available at the following web address: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp.*

Pursuant to s. 227.21, Stats., DATCP will request permission from the attorney general and revisor of statutes to incorporate the following standards by reference in this rule, without reproducing the standards in full in this rule. Copies of these documents will be on file with DATCP and the revisor of statutes, and are available at the following web address: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp.*

- *Wisconsin conservation planning technical note WI-1 (December, 2006).* This is a companion document to the *NRCS technical guide nutrient management standard 590.*

- *Recommended methods of manure analysis, UWEX publication A3769 (2003).*

- *Soil test recommendations for field, fruit and vegetable crops, UWEX publication A-2809 (1998).* A convenient summary of this publication (not the full publication) is included as *Appendix B* to this rule ("Nutrient Management Fast Facts").

- *Nutrient Application Guidelines for Field, Vegetable, and Fruit Crops in Wisconsin UWEX publication A-2809 (2006).*

- *Wisconsin Procedures for Soil Testing, Plant Analysis and Feed and Forage Analysis, Department of Soil Science, University of Wisconsin-Madison (December, 2006).*

Fiscal Impact

This rule will not have a major fiscal impact on DATCP or local units of government. This rule updates nutrient management standards for Wisconsin farms. But it does not mandate additional nutrient management plans. Nor does it mandate additional state or local review of nutrient management plans (beyond what already exists).

County conservation staff currently monitor nutrient management plans as necessary, on farms that are required to have those plans. This rule will change applicable standards for nutrient management plans, but will not increase the number of nutrient management plans required.

DATCP and county land conservation staff will need to become familiar with the new standards. Staff will need to provide information and education about the new standards, and respond to questions from farmers and others. DATCP will undertake these new responsibilities with existing staff. DATCP estimates that counties will also be able to implement the revised standards with existing staff. A complete fiscal estimate is attached.

Business Impact

General

This rule may have a significant impact on farm operators and other businesses in this state. Many of the affected operations are "small businesses." Because this rule may have a significant economic impact on small businesses, it is subject to the delayed small business effective date provision in s. 227.22(2)(e), Stats. (delays rule application to small businesses by 2 months, compared to effective date for other businesses). A complete business impact analysis, including a small business analysis ("initial regulatory flexibility analysis") is attached.

Under 2003 Wis. Act 145, DATCP and other agencies must adopt rules spelling out their rule enforcement policy for small businesses. DATCP has not incorporated a small business enforcement policy in this rule, but has adopted a separate rule on that subject.

Under current state statutes, including s. 281.16(3)(e), Stats., enforcement of nutrient management rules is contingent on cost-sharing (there are limited exceptions). This rule does not change the current cost-sharing requirement.

Affected Farmers

This rule, if enforced, may increase costs for some farmers. But enforcement of this rule is subject to statutory cost-sharing requirements. Actual enforcement will therefore depend on the availability of cost-share funds, which are currently quite limited.

This rule will generally have more impact on livestock farmers than other farmers. Some livestock farmers will be significantly affected, but others will not. Many farmers will actually save money by complying with this rule.

The primary impact of this rule relates to phosphorus management, and its effect on manure applications. Manure generally provides more phosphorus than nitrogen compared to crop needs for those nutrients. So farmers who apply manure based solely on nitrogen needs may end up applying too much phosphorus. Some livestock operators may need more acreage for manure disposal, to avoid excessive phosphorus applications.

Costs will vary widely by livestock species (poultry manure, for example, is especially high in phosphorus). Costs will also vary by size of livestock operation, geographic location, cropping patterns, availability of acreage for manure disposal, and (importantly) current soil-test phosphorus levels.

Livestock operations affected by this rule include dairy cattle, beef, hog, sheep, goat and poultry operations. Those operations collectively account for approximately 3.5 million equivalent "animal units" in the state (for example, a dairy cow equals 1.4 "animal units" while a chicken equals 0.01 "animal unit" based on their respective size and manure production). Dairy cattle represent about 2.5 million of the 3.5 million "animal units" in the state.

Dairy Farms

Relatively few dairy farms will have to change current practices to comply with this rule. Most (approximately 2/3) of Wisconsin's dairy farms are self-sufficient in grain and forage production, and therefore have ample cropland area for manure spreading. Legume forage production helps meet crop demands for nitrogen, and liquid dairy manure has a relatively high ratio of nitrogen to phosphorus. Those factors make it less likely that manure applications to meet nitrogen needs will result in excessive phosphorus applications. A recent University of Wisconsin study of 33 representative dairy farms shows that most dairy farmers already comply with the standards in this rule.

This rule will affect winter spreading of manure, especially in water quality management areas (within 300 feet of a perennial stream or within 1,000 feet of a lake). However, winter applications currently affect a relatively small share of dairy farm acreage, and the vast majority of winter applications are made outside water quality management areas. UW survey results indicate that many farmers who winter-spread manure in water quality management areas are willing (and able) to change their manure application practices to comply with this rule.

Other Livestock Operations

DATCP estimated nutrient management compliance costs under this rule, compared to current rules, for a wide variety of livestock operations. DATCP simulated compliance costs for 80 hypothetical livestock operations representing 8 different livestock types (dairy, beef, swine, chickens, ducks, turkeys, and sheep and goats), 5 different soil types (representing soils in Chippewa, Adams, Outagamie, Jefferson and Lafayette counties), and 2 different soil-test phosphorus levels (52 ppm and 105 ppm). DATCP used typical nutrient values for the manure of each livestock species, common crop rotations, and various tillage options used on Wisconsin farms. Simulation scenarios, analyses and results are shown at the following website: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp*

About 63% of Wisconsin farm acreage tests below 50 ppm phosphorus (the median state soil test for phosphorus is 38 ppm and the average is 50 ppm). DATCP therefore assumes that about 63% of Wisconsin livestock operations have soil-test phosphorus below 50 ppm. According to DATCP's analysis, those operations will incur no added cost to comply with the phosphorus-based standard compared to the current nitrogen-based standard.

About 26% of all livestock operations have soil-test phosphorus between 50 ppm and 100 ppm. With the exception of dairy operations, nearly all of those operations will need to reduce phosphorus applications per acre to comply with the new standard. Most dairy operations will be unaffected, for reasons discussed above. Other operations will experience added costs per "animal unit" (for manure hauling, added land spreading area, substituting nitrogen fertilizer for manure, etc.) ranging from $0 for dairy to $26 for poultry.

About 11% of Wisconsin livestock operations have soil-test phosphorus over 100 ppm. Essentially *all* of those operations (*including* dairy operations) will need to reduce phosphorus applications per acre in order to comply with the new phosphorus standard. That will add costs per "animal unit" (for manure hauling, added land spreading area, nitrogen fertilizer rather than manure, etc.) ranging from $5 for dairy to $38 for poultry.

The total estimated annual cost to comply with the new phosphorus standard is show below:

Dairy (2.5 million animal units):	=	$ 1.7 million
Beef (400,000 animal units):	=	$ 1.7 million
Swine (210,000 animal units):	=	$ 0.3 million
Chickens (390,000 animal units):	=	$ 2.0 million
Ducks (33,000 animal units):	=	$ 0.3 million
Turkeys (47,000 animal units):	=	$ 0.4 million
Sheep/Goats (11,000 animal units):	=	$ 0.05 million
		$ 6.5 million

This cost estimate represents the most restrictive, high-cost scenario. It includes costs to meet *both* the soil-test phosphorus management standard *and* the phosphorus index standard, when in fact farms are required to comply with *only one* of these 2 alternative standards.

The cost estimate assumes that soil-test phosphorus values will *not* continue to rise as they have been doing steadily for the last 40 years. If farmers allow their soil-test phosphorus levels to rise above 100 ppm, subsequent costs to comply with the nutrient management standard will be much higher.

Hearing comments suggested that DATCP's estimates of manure hauling costs were too low, and that DATCP had failed to consider costs of substituting nitrogen fertilizer for manure (substitution will be necessary in some cases to prevent excessive phosphorus application from manure). On the other hand, the DATCP simulations also ignored potential *cost-savings* related to:

- Manure processing and sale as commercial fertilizer (an option widely used in the poultry industry).

- Use of the phosphorus index standard, rather than the soil-test phosphorus standard (farmers may opt to use the phosphorus index standard, which is less likely to limit phosphorus applications).

DATCP believes that any underestimated costs are offset by underestimated savings, so that the cost estimates are on balance reasonably accurate. DATCP prepared nutrient management plans for a number of actual farms, and its cost analyses for those farms are consistent with its overall estimates.

The total statewide cost of $6.5 million per year, divided by the total number of cropland acres in the state (about 9 million), yields an average cost of $0.72 per cropland acre per year. Some farms will have lower costs, and others will have higher costs. Most of the costs represent increased manure hauling costs. The cost for an individual livestock operation will depend on a number of factors, but the existing level of soil-test phosphorus is critical. If livestock producers prevent further increases in soil-test phosphorus levels, and reduce soil-test phosphorus levels in high-testing soils, costs will be lower over time.

The cost estimate of $6.5 million per year ($0.72 per acre) assumes full, voluntary statewide compliance with this nutrient management rule. Actual costs in the short term will be lower, because some farmers will not comply voluntarily and rule enforcement is contingent on cost-sharing. However noncompliance will drive up soil-test phosphorus levels over time, and that will increase long-term compliance costs.

Cost-Sharing Required

Under current state law, enforcement of nutrient management standards is generally contingent on cost-sharing. This rule does not change the current cost-sharing requirement. Although farmers are theoretically required to have and comply with nutrient management plans (beginning in 2005 for some farmers and 2008 for others), current statutes prevent enforcement against most farmers unless those farmers receive cost-sharing.

A shortage of cost-share funding effectively limits enforcement. In cases where a farmer is actually forced to comply, the cost must be shared. Farmers may also receive cost-sharing for voluntary compliance.

The cost-share offer must cover 70% of the cost to conduct soil tests and prepare a nutrient management plan (90% if there is financial hardship), or $7 per cropland acre, *whichever amount is greater* (the farmer chooses). The percentage rate applies only to costs of writing a nutrient management plan and performing soil tests (not manure hauling, etc.). The flat-rate payment ($7 per acre) applies regardless of actual costs.

Cost-share payments (whether flat-rate or percentage) are limited to 4 years. After that, the farmer assumes the full cost of compliance. Once a farmer achieves compliance, the farmer must maintain compliance regardless of cost-sharing. If a farmer falls out of compliance, the farmer is not eligible for cost-sharing to regain compliance.

In cost-share transactions to date, nearly all farmers have chosen the flat-rate ($7 per acre) payment. If farmers need additional acres to spread manure (as some will under a phosphorus standard), the total cost-share payment will increase accordingly (even if the rate per acre does not change). The limited availability of state cost-share funds will limit actual enforcement of nutrient management requirements. Available funds will be allocated among fewer operations.

Some farmers must comply with nutrient management requirements, *regardless* of cost-sharing. These include:

- Farmers who claim farmland preservation tax credits (about 12,000 farms).

- Livestock operators who need "point source" pollution discharge permits from DNR (about 140 farms).

- Livestock operators who need a local manure storage permit for a voluntarily constructed manure storage facility (about 150 farms per year). See current ATCP 50.54(2)(b).

- Livestock operators who need a local permit for a new or expanded livestock facility (about 50-70 farms per year). See current ATCP 51.

Nutrient Management Planners and Soil Testing Laboratories

This rule will marginally increase the demand for professional nutrient management planning and soil testing services. While farmers can qualify to write their own nutrient management plans, they will likely retain professional services because greater expertise is needed to develop phosphorus-based plans. Soil tests (and manure tests if used to determine the nutrient contents of manure) must be conducted at qualified laboratories.

Under this rule, a farmer is presumed to comply with nutrient management standards if the farmer follows a plan prepared or approved by a qualified nutrient management planner other than the farmer (the planner is responsible for ensuring that the plan complies).

Manure Haulers

This rule will increase demand for manure hauling services. Some livestock operators will not be able or willing to haul all of their own manure, and will hire commercial haulers to transport and apply manure to appropriate fields.

Commercial Fertilizer Dealers

This rule will reduce sales of commercial *phosphorus* fertilizer, but may increase sales of commercial *nitrogen* fertilizer to meet crop needs (where manure applications are curtailed because of phosphorus constraints).

Construction Contractors and Conservation Planners

This rule may increase demand for construction projects and conservation planning to reduce soil erosion on farmland. This rule does not change farm conservation construction standards or requirements, but may result in a slight increase in demand for practices that help reduce soil erosion to "T-value" (the rule limits nutrient applications to lands on which soil erosion exceeds "T-value").

Environmental Impact

This rule will protect the environment by preventing excess nutrient applications that can result in nonpoint source pollution of surface water and groundwater. Nonpoint source pollution from farms has a major impact on surface water and groundwater quality. A complete environmental assessment is attached**.**

Federal Regulation

The federal government does not regulate nutrient management on farms except that, under the federal Clean Water Act, certain concentrated animal feeding operations are subject to federal regulation as water pollution "point sources." The Wisconsin department of natural resources (DNR) regulates these operations by permit, under authority delegated from the United States environmental protection agency (EPA).

This rule incorporates NRCS nutrient management standards for farms. NRCS recently updated its nutrient management standards based on phosphorus as well as nitrogen. NRCS does not enforce its standards as mandatory standards, except for farms that apply for and receive cost-share funding from NRCS. However, DNR and DATCP have incorporated the federal standards in state nutrient management rules. EPA and DNR also incorporate NRCS standards as mandatory standards for animal feeding operations that are required to hold "point source" pollution discharge permits under the federal Clean Water Act.

DNR has proposed changes in current DNR rules for animal feeding operations that need "point source" pollution discharge permits from DNR (including concentrated animal feeding operations with 1,000 animal units or more). The DNR rules, if adopted as proposed, could vary from the latest NRCS nutrient management standards. DATCP is proposing to incorporate the NRCS standards, *without* potential DNR variations, in this rule.

EPA requires states to identify "impaired" waters that are not expected to achieve water quality standards after implementing required "point source" controls. States must establish allowable levels or "total maximum daily loads" for non-point source pollutants, such as sediment and phosphorus, to meet water quality standards in these impaired waters.

DNR has identified "impaired" waters in Wisconsin. Under current DATCP rules, DATCP nutrient management requirements first apply to "impaired" watersheds on January 1, 2005 and to other areas on January 1, 2008.

Surrounding State Programs

- Illinois sets requirements for waste management plans. Livestock facilities with fewer than 1,000 "animal units" are not required to prepare a waste management plan. Livestock facilities with more than 1,000 but fewer than 5,000 "animal units" must prepare, maintain, and implement a waste management plan. Livestock facilities with more than 5,000 "animal units" must prepare a plan and submit it for approval. Manure applications must be based on crop need for nitrogen (and phosphorus if soil-test phosphorus levels are 150 ppm or more). Plans must be updated annually.

- Iowa spells out manure management requirements for livestock operators. Confined feeding operations with more than 500 "animal units" must submit an annual manure management plan. By August 25, 2008, those plans must use a phosphorus index to determine manure application rates. On fields with a low phosphorus index rating (0-2), manure may be applied to the nitrogen need of the crop. On fields with a medium phosphorus index rating (2-5), manure may be applied to the nitrogen need of the crop only if the applications do not raise the rating above 5. Manure may not be applied to fields with a phosphorus rating of 5-15 unless the farmer adopts management practices to reduce the rating below 5. Manure may not be applied to fields with a phosphorus rating above 15.

- Michigan uses its Right to Farm Act as the foundation for its non-point source pollution prevention programs. The Michigan Right to Farm Act encourages the voluntary adoption of best management practices. Voluntary adoption of best management practices provides a defense against nuisance claims and lawsuits. Michigan has developed 7 best management practices, 2 of which are related to nutrient management. These best management practices generally permit manure applications up to the nitrogen need of the crop until soil-test phosphorus levels reach 75 ppm. Above this level, the phosphorus content of manure applications may not exceed the phosphorus need of the next season's crop. When soil-test phosphorus reaches 150 ppm, manure applications must be discontinued until soil-test phosphorus levels are drawn down.

- Under Minnesota's revised feedlot rule, feeding operations with more than 100 "animal units" must have a manure management plan in order to obtain certain permits. Manure can be applied to the nitrogen need of the crop. However, for fields on which soil-test phosphorus levels are high, plans must include approved strategies to minimize phosphorus runoff to surface waters. Operators must keep records of manure applications for at least 3 years, and must update plans on an annual basis.

SECTION 1. ATCP 50.04(3)(d) is amended to read:

ATCP 50.04(3)(d) The plan shall be based on soil nutrient tests conducted at a laboratory that is certified under s. ATCP 50.50 <u>to conduct those tests</u>.

SECTION 2. ATCP 50.04(3)(dm) and (dm)1.(note) are created to read:

ATCP 50.04(3)(dm) If the nutrient management plan uses manure nutrient values, other than nutrient values of organic by-products regulated under ch. NR 113, 204 or 214, the manure nutrient values shall be based on one of the following:

1. Standard values specified in Wisconsin conservation planning technical note WI-1 (December, 2006), companion document to the NRCS technical guide standard 590.

NOTE: Wisconsin conservation planning technical note WI-1 is on file with the department and the revisor of statutes. Copies are available from your county land conservation department or the following web address: ***http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp.*** The NRCS technical guide standard 590 (September, 2005) is reproduced, without the companion technical note, in Appendix D.

2. Manure analyses conducted at a laboratory that complies with s. ATCP 50.50(8).

SECTION 3. ATCP 50.04(3)(e) and (note) are amended to read:

ATCP 50.04(3)(e) The plan shall comply with the NRCS technical guide nutrient management standard 590 ~~dated March, 1999~~ (September, 2005), except for sections V.D, V.E and VI, and shall also comply with the Wisconsin conservation planning technical note WI-1 (December, 2006).

NOTE: The checklist in Appendix C may be used to gather information for a nutrient management plan. NRCS technical guide nutrient management standard 590 (~~March, 1999~~) (September, 2005) is reproduced in Appendix D. ~~That standard is a nitrogen-based standard. However, NRCS is in the process of revising it to incorporate a phosphorus-based standard. The department will initiate rulemaking to adopt the NRCS phosphorus-based standard by January 1, 2005 if NRCS has adopted that standard by that date.~~ The Wisconsin conservation planning technical note WI-1 (December, 2006) is not reproduced in Appendix D but is on file with the department and the revisor of statutes. Copies are available from your county land conservation office or the following web address: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp*.

SECTION 4. ATCP 50.04(3)(f)(intro.) and (f)3. are amended to read:

ATCP 50.04(3)(f)(intro.) The plan may not recommend nutrient applications that exceed the amounts required to achieve applicable crop fertility levels recommended by the university of Wisconsin-extension in the 1998 edition of Soil Test Recommendations for Field, Vegetable and Fruit Crops, UWEX publication A-2809 ~~(1998)~~, or in the latest subsequent edition of that publication if preferred by the landowner, unless the nutrient management planner can show that one or more of the following circumstances justifies the recommended application:

(f)3. Excess nutrients are the result of ~~prior~~ manure applications made in the last year prior to the implementation of the nutrient management plan.

SECTION 5. ATCP 50.04(3)(f)4. is repealed and recreated to read:

ATCP 50.04(3)(f)4. Other special agronomic conditions documented by the planner. A planner who wishes to justify higher applications shall include credible information to show that the higher applications will not materially increase environmental damage.

SECTION 6. ATCP 50.04(3)(f)5. to 9. are repealed.

SECTION 7. ATCP 50.04(3)(f)(note) is amended to read:

NOTE: *Appendix B* contains a convenient summary of UWEX publication A-2809, for selected crops. You may obtain the complete publication and the summary from your county extension agent. The complete publication is also on file with the department~~, the secretary of state~~ and the revisor of statutes. Copies are available from your county land conservation office or the following web address: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp*.

SECTION 8. ATCP 50.04(3)(g) is amended to read:

ATCP 50.04(3)(g) The plan shall be consistent with any nutrient management plan required under ch. NR 113, NR 204 or NR 214 if the landowner applies septage, municipal sludge, industrial waste or industrial by-products to the land. A landowner is not required to have a nutrient management plan under this subsection if the landowner applies ~~only~~ primarily

septage, municipal sludge, industrial waste or industrial byproducts according to ch. NR 113, NR 204 or NR 214.

SECTION 9. ATCP 50.04(3)(h)2.(note) is repealed.

SECTION 10. ATCP 50.04(3)(i) is created to read:

ATCP 50.04(3)(i) A landowner is rebuttably presumed to comply with this section if the landowner complies with a nutrient management plan that is prepared or approved by a nutrient management planner, other than the farmer, who is qualified under s. ATCP 50.48.

SECTION 11. ATCP 50.12(2)(f)(note)(3rd bullet) is amended to read:

- Farms located in watersheds that DNR has listed pursuant to 33 USC 1313. This is also known as the "303(d) list of impaired waters." ~~*Appendix A* contains a map showing the watersheds that drain to listed waters.~~

SECTION 12. ATCP 50.30(2)(a)(note) is amended to read:

NOTE: The list of waters under par. (a) is also known as the "303(d) list of impaired waters." ~~*Appendix A* contains a map showing watersheds that drain to the listed waters.~~

SECTION 13. ATCP 50.48(2)(a)3. is amended to read:

ATCP 50.48(2)(a)3. Registered as a ~~crop scientist, crop specialist, soil scientist, soil specialist or professional agronomist in the American registry of certified professionals in agronomy, crops and soils~~ soil scientist by the soil science society of America or as a professional agronomist by the American society of agronomy.

SECTION 14. ATCP 50.50(title) is amended to read:

ATCP 50.50(title) Soil and manure testing laboratories.

SECTION 15. ATCP 50.50(2)(intro.), (b), (c), (d)2. and (f) are amended to read:

ATCP 50.50(2)(intro.) A laboratory operator may apply to the department for certification under sub. (1). An operator shall submit a separate application, using the form

shown in *Appendix A*, for each laboratory for which the operator seeks certification. ~~The operator shall apply on a form provided by the department.~~ The application shall include all of the following:

(b) The address of ~~every~~ the laboratory ~~in this state for which the operator seeks certification~~.

(c) The name and telephone number of the individual who is responsible for on-site administration of ~~each~~ the laboratory ~~under par. (b)~~.

(d)2. Buffer pH ~~(SMP)~~.

(f) ~~An agreement to comply~~ License conditions specified by the department, including compliance with subs. (4) to (6).

SECTION 16. ATCP 50.50(2)(note) is created to read:

NOTE: A list of approved soil testing laboratories can be found at the following web address: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp*.

SECTION 17. ATCP 50.50(8) and (notes) are created to read:

ATCP 50.50(8) MANURE TESTING LABORATORIES. Manure nutrient values determined by laboratory analyses do not qualify under s. ATCP 50.04(3)(dm)2. unless the laboratory performing those analyses complies with all of the following:

(a) The laboratory participates in the manure analysis proficiency program administered by the Minnesota department of agriculture, or in an equivalent proficiency program administered by the university of Wisconsin soil analysis laboratory, and provides copies of proficiency reports to the department upon request.

NOTE: A manure testing laboratory may qualify under sub. (8), regardless of whether the laboratory is certified as a soil testing laboratory under sub. (1). A laboratory may contact the department, at the following address, for information on how to enroll in a manure analysis proficiency program under par. (a):

Wisconsin Department of Agriculture, Trade and Consumer Protection
Agricultural Resource Management Division
Nutrient Management Program
PO Box 8911
Madison, WI 53708-8911

(b) The laboratory is capable of performing all of the following manure analyses according to methods prescribed by the university of Wisconsin-extension in *Recommended Methods of Manure Analysis*, UWEX publication A3769 (2003):

1. Percent dry matter (DM).

2. Total nitrogen.

3. Total phosphorus expressed as $P_2 0_5$.

4. Total potassium expressed as $K_2 0$.

NOTE: The university of Wisconsin-extension publication, *Recommended Methods of Manure Analysis*, UWEX publication A3769 (2003), is on file with the department and the revisor of statutes. Copies may be obtained from the university of Wisconsin-extension at the following address: University of Wisconsin-Madison, Department of Soil Science, 1525 Observatory Drive, Madison, WI 53706-1299.

(c) The laboratory is capable of estimating total and available nutrient levels based on the manure tests under par. (b) and the availability percentages shown in Table 3 of part III of the Wisconsin conservation planning technical note WI-1 (December, 2006), a companion document to the NRCS technical guide nutrient management standard 590.

NOTE: The NRCS technical guide nutrient management standard 590 (September, 2005) is reproduced in Appendix D. The Wisconsin conservation planning technical note WI-1 is not reproduced in Appendix D but is on file with the department, the secretary of state and the revisor of statutes. Copies may be obtained from your county land conservation department or at the following web address: *http://www.datcp.state.wi.us/arm/agriculture/land-water/conservation/nutrient-mngmt/planning.jsp.*

SECTION 18. ATCP 50.62(3)(d) and (note) are amended to read:

ATCP 50.62(3)(d) Any manure storage system costs related to an animal feeding operation if all of the manure from the operation could be applied to land according to the NRCS technical guide nutrient management standard 590 ~~dated March, 1999,~~ (September, 2005) without causing or aggravating nonattainment of water quality standards.

NOTE: The NRCS technical guide nutrient management standard 590 (~~March, 1999~~ September, 2005) is reproduced in Appendix D. The feasibility of applying manure to land under par. (d) will be determined in light of existing topographic, climatological and management factors.

SECTION 19. ATCP 50.78(3)(a) and (note) are amended to read:

ATCP 50.78(3)(a) The nutrient management practice complies with NRCS technical guide nutrient management standard 590 ~~dated March, 1999~~ (September, 2005).

NOTE: The NRCS technical guide nutrient management standard 590 (~~March, 1999~~ September, 2005) is reproduced in Appendix D.

SECTION 20. Chapter ATCP 50 *Appendices A* to *D* are repealed and recreated to read as shown in *Appendices A* to *D* attached.

SECTION 21. *Appendix G* to ch. ATCP 50, primary standard category number 1, bullet-paragraph related to Nutrient Management Standard 590, is amended to read:

- Nutrient Management Standard 590 (~~March, 1999~~ September, 2005).

EFFECTIVE DATE AND INITIAL APPLICABILITY. (1) Except as provided in sub. (2), this rule takes effect on the first day of the month following publication in the Wisconsin administrative register, as provided under s. 227.22(2)(intro.).

(2) This rule first applies to small businesses as defined in s. 227.114(1), Stats., on the first day of the third month commencing after the rule publication date, as required by s. 227.22(2)(e), Stats.

Dated this _____ day of _____, _____.

STATE OF WISCONSIN
DEPARTMENT OF AGRICULTURE,
TRADE AND CONSUMER PROTECTION

By _____
Rodney J. Nilsestuen, Secretary