The following memorandum summarizes the most significant new changes to Wis. Admin. Code ch. NR 243, scheduled to take effect in May 2007. This memorandum presents a summary only and should not be relied upon to the exclusion of a comprehensive review of the rule and its impacts given a specific set of facts and circumstances.

ANALYSIS

Wisconsin's comprehensive revision to its EPA counterpart regulation concerning concentrated animal feeding operations ("CAFOs") was approved by the Natural Resources Board in January 2007. The rule will take effect in May 2007. CAFOs fall into three categories: Large, Medium, and Designated. Large CAFOs have greater than or equal to 1,000 animal units, Medium CAFOs have between 300 and 999 animal units, and Designated CAFOs are Medium or smaller CAFOs that have been designated as having a significant discharge.

Wisconsin's proposed rulemaking, is more stringent than the federal rule in a number of important aspects. The following lists some of the most significant changes to the Wisconsin rules.

I. Calculation of Animal Units Adds A Second Calculation Methodology

The existing rules had one calculation method to determine the number of animal units at a farm, but the new rules have added a second calculation methodology. DNR uses the highest calculated value of the two methods to determine the size of an operation.[1] The original method was based on the combined animal unit equivalency numbers for both mature and immature animals, including animals at different sites that DNR considered to be part of the same operation.[2] Under the new second method, "the animal types are not added together to determine the total; however some animal types ... have larger animal unit conversion factors than under the current rule."[3]

[1] Wis. Admin. Code § NR 243.05(1).
[2] Id. § NR 243.05(2).
[3] Order Repealing and Recreating NR 243 at 2 (emphasis added).

The following is a list[4] of the new animal unit equivalency factors:

Table 2B – Individual Animal Unit Calculation Equivalencies		
Animal Type	**Individual Animal Equivalent of 1,000 Animal Units**	**Individual Animal Unit Equivalency Factor**
DAIRY CATTLE:		
Milking and Dry Cows	700	1.43
Heifers (400 to 1200 lbs)	1000	1.0
VEAL CALVES		
Per Animal	1000	1.0
BEEF CATTLE:		
Steers, Bulls or Cows (400 lbs to Mkt)	1000	1.0
SWINE:		
Pigs (55 lbs to Mkt)	2500	0.4
Pigs (up to 55 lbs)	10000	0.1
SHEEP:		
Per Animal	10000	0.1
HORSES:		
Per Animal	500	2.0
DUCKS:		
Per Bird (Liquid poultry manure handling)	5000	0.2
Per Bird (Non-liquid poultry manure handling)	30000	0.0333
CHICKENS:		
Per Bird (Liquid poultry manure handling)	30000	0.0333
Layers (Non-liquid poultry manure handling)	82000	0.0123
Broilers and Pullets (Non-liquid poultry manure handling)	125000	0.008
TURKEYS:		
Per Bird	55000	0.018

Again, to calculate the total animal units under the new methodology, the "highest calculated number of animal units for any individual animal type is used."[5] Therefore, if the farm had 700 milking cows and 500 heifers (400 to 800 lbs), the animal units under the new methodology would be 1,001 (using the milking cows – 700 * 1.43). Please remember, however, that the highest of the two methodologies is used, so in this case, the old methodology would be used, which requires 980 units for the milking cows (700 * 1.4) plus 300 units for the heifers (500 * 0.6) for a total of 1280 animal units.

II. Large CAFO Permitting Changes

The old rules required all animal feeding operations that confine more than 1,000 animal units to apply for a WPDES permit. The new rules, however, only require a permit for Large CAFOs if the farm stores "manure or process wastewater in a structure that is below or at grade, or if the operation will land apply manure or process wastewater."[6] All Large CAFOs that discharge pollutants from manure or process

[4] Wis. Admin. Code § NR 234.05, Table 2b.
[5] *Id*. § NR 243.05(3).
[6] Order Repealing and Recreating NR 243 at 2.

wastewater to waters of the state must get a WPDES permit, however.[7] The existing rules also made the following changes to the application procedures:

- A final complete permit application must be submitted 180 days before becoming a Large CAFO rather than the 12 months in the old rules.[8] However, for first time permit applicants, a general application with basic operational information (e.g., type of operation, anticipated number of animal units) must be submitted 12 months before becoming a Large CAFO.

- The new rules are more specific as to what must be included in the final permit application, including a complete nutrient management plan.[9]

- Application requirements for existing facilities that purchase another operation to become a Large CAFO have changed. These facilities will now have 90 days to submit an application to DNR.[10]

- The new rules now include specific application requirements for general permits and specifically authorize DNR to develop a general permit program for livestock operations.

The new rules also include various standard WPDES permit requirements.[11] Although not required in the old rules, many of the changes in the new rules have been required in WPDES permits for some time. For example, the farm must conduct periodic inspection of the animal production area and correct and report any instances of permit noncompliance. One significant change is to follow the federal requirement of daily inspections of animal watering systems. Manure, process wastewater, and solids where land applied must be periodically sampled, and daily logs of land application activities must also be kept. There are, however, significant new standards for other types of operations like duck, veal, and poultry operations.[12]

III. Large CAFO Nutrient Management Planning Changes

The most significant rule changes affect Large CAFO nutrient management planning. First off, the new rules require compliance with the updated technical standard for nutrient management planning, the Wisconsin version of NRCS Standard 590 (2005), which requires a phosphorous-based nutrient management plan.[13] As with the old rules, however, the DNR rules deviate in certain significant respects from the NRCS Standard 590. The following are some notable changes to the land application procedures:

- The previous rules did not allow runoff or discharges at any time. Now certain discharges are allowed if they occur as a result of a 25-year, 24-hour rainfall

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[7] Wis. Admin. Code § NR 243.12(1) ("A large CAFO may not discharge pollutants from manure or process wastewater to waters of the state unless the discharge is covered by and in compliance with a WPDES permit.").
[8] *Id*. § NR 243.12(1)(a).
[9] For the list of permit application requirements see Wis. Admin. Code § NR 234.12(2).
[10] Wis. Admin. Code § NR 243.12(1)(c).
[11] *Id*. § NR 243.13.
[12] *See* i*d*. § NR 243.13(3) (regulating swine, poultry other than ducks, and veal calves).
[13] *Id*. § NR 243.14(1).

event.[14] Generally speaking, a 25-year, 24-hour rainfall event occurs if there has been 4 to 5 inches of rain in a 24-hour period.[15]

- Additional practices must be implemented when applying manure and process wastewater within a Surface Water Quality Management Area (within 1,000 feet of a lake or 300 feet of a stream).[16]

- Phosphorus applications are limited in accordance with the soil test phosphorus or phosphorus index method outlined in NRCS Standard 590.[17] Additional phosphorus restrictions apply to fields with high soil test levels (greater than 100 ppm).[18]

- There are additional restrictions on winter land application of solid manure. Except as provided in the next bullet point, operations may choose to surface apply solid manure on frozen or snow-covered ground provided they follow these restrictions:

[14] *Id*. § NR 243.14(2)(b)4.
[15] There is a table explaining the term "25-year, 24-hour rainfall event" located in § NR 243.04.
[16] *See id*. § NR 243.14(4) (stating the SWQMA application restrictions).
[17] *Id*. § NR 243.14(5)(a).
[18] *Id*. § NR 243.14(5)(b).

Table 4-Restrictions for Surface Applying Solid Manure on Frozen and Snow Covered Ground

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_2O_5 per winter season, the following growing season's crop P_2O_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_2O_5 per winter season, the following growing season's crop P_2O_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.			

- Beginning January 1, 2008, though, solid manure may not be surface applied on frozen ground or areas of fields with an inch of snow or more during the months of February and March.[19] Instead, operations may choose to either stack the solid manure or use a storage facility.

- To facilitate these February and March requirements, existing CAFOs must generally either construct two months of solid manure storage or otherwise identify areas where they can stack the solid manure.

- By January 1, 2010, all existing source CAFOs must have 180 days of liquid manure storage and will be prohibited from surface applying liquid manure on frozen or snow-covered ground throughout the winter.[20] New source CAFOs are subject to these restrictions upon permit issuance, and there are some

[19] *Id*. § NR 243.14(6)(c).
[20] *Id*. § NR 243.14(7).

exceptions to the surface application ban for emergency situations. Until 2010, if an existing source CAFO does not have 180 days of liquid manure storage, the permittee may surface apply liquid manure on frozen or snow covered ground in winter months other than February and March in accordance with the following requirements:

Table 5–Frozen and Snow Covered Ground Restrictions – Emergency Surface Applications of Liquid Manure

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_2O_5, the following growing season's crop P_2O_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_2O_5, the following growing season's crop P_2O_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			

- Manure storage facilities now must meet the most recent version of Wisconsin NRCS Standard 313.

- There are also increased setbacks from direct conduits to groundwater, drinking water supply wells, increased separation distances from groundwater and fractured bedrock, and winter application restrictions on soils with reduced distances to bedrock.

IV. Other CAFO Rule Changes

Generally speaking, there were not many changes to the rules for Medium and Designated CAFOs. The new rules do not make any substantive changes to existing notice of discharge ("NOD") requirements. The primary change in the new rules is that one additional factor is added for designating small and medium CAFOs: "if the Department determines that a discharge from an operation has contaminated a properly-

constructed well, the Department may require that the operation obtain a WPDES permit."[21]

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[21] Order Repealing and Recreating NR 243 at 5.