

ILLINOIS POLLUTION CONTROL BOARD

April 17, 2014

IN THE MATTER OF:)
)
CONCENTRATED ANIMAL FEEDING) R12-23
OPERATIONS (CAFOs): PROPOSED) (Rulemaking - Water)
AMENDMENTS TO 35 ILL. ADM. CODE)
PARTS 501, 502, AND 504)

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by J.A. Burke):

On March 1, 2012, the Illinois Environmental Protection Agency (Agency) filed a proposal to amend Parts 501, 502, and 504 of the Board's agriculture related pollution regulations. *See* 35 Ill. Adm. Code 501, 502, 504. The Agency's proposal included its Statement of Reasons (SR) and a Technical Support Document (TSD). On November 7, 2013, the Board proposed for first notice amendments to these regulations. After reviewing the first-notice comments and responses to them, the Board proposes the amendments to Parts 501, 502, and 504 set forth in its order below and submits them to the Joint Committee on Administrative Rules (JCAR) for second-notice review.

The Board's 330-page first-notice opinion included a review of the rulemaking record and discussion of the contested issues raised to that point in this proceeding. Rather than reproduce those sections today, the Board recommends that the reader wishing to revisit them consult the first-notice opinion.

The Board's opinion begins by providing an abbreviated procedural history beginning with adoption of the Board's first-notice proposal at pages 1-2. The Board then summarizes the public comments it has received at pages 2-3. Next, the Board provides at pages 3-81 a section-by-section discussion of the issues raised in the first-notice comments and the responses to them. The Board then discusses the economic reasonableness and technical feasibility of its second-notice proposal at pages 81-83. Following its conclusion at page 83 to submit a proposal to JCAR for second-notice review, the Board sets forth the proposed amendments to Parts 501, 502, and 504 of its agricultural water pollution regulations in its order at pages 84-158.

ABBREVIATED PROCEDURAL HISTORY

On November 7, 2013, the Board adopted a first-notice opinion and order (Board Opinion). The proposed regulations were published in the *Illinois Register* on December 2, 2013, starting a comment period of at least 45 days. *See* 37 Ill Reg. 18974, 19005, 19074 (Dec. 2, 2013).

On December 23, 2013, the Board received comments from Ivan N. Dozier, State Conservationist, on behalf of the United States Department of Agriculture, Natural Resources Conservation Service (USDA NRCS or NRCS) (PC 30). On January 14, 2014, the Board received comments from Mr. S.V. Panno of the Illinois State Geological Survey (PC 1175).

On January 15, 2014, the hearing officer issued an order setting a deadline of January 30, 2014, to file first-notice comments. On January 30, 2014, the Board received first-notice comments from the Agency (PC 3027) and the League of Women Voters of Illinois (LWVI) (PC 3028). Also on January 30, 2014, the Board received first-notice comments from the Agricultural Coalition (PC 3030), which consists of the Illinois Pork Producers Association, the Illinois Farm Bureau, the Illinois Beef Association, and the Illinois Milk Producers Association. Also on January 30, 2014, the Board received first-notice comments from the Environmental Groups (PC 3031), which include the Environmental Law and Policy Center, Prairie Rivers Network, Illinois Citizens for Clean Air and Water, and the Environmental Integrity Project.

On February 7, 2014, the hearing officer issued an order setting a deadline of February 21, 2014 to respond to first-notice comments. The order requested that the Agency respond to three specific issues but allowed response to any of the first-notice comments. On February 21, 2014, the Board received the Agricultural Coalition's response to the Environmental Groups' first-notice comments (PC 3040), the Environmental Groups' response to first-notice comments (PC 3041), and the Agency's additional first-notice comments (PC 3042).

SUMMARY OF PUBLIC COMMENTS

The Board has now received more than 3,000 comments, which range from lengthy post-hearing comments by participating organizations to brief individual electronic messages. A large majority of the comments support the Board's first-notice proposal. The comments received in this proceeding can be viewed through the Clerk's Office On Line on the Board's web site (www.ipcb.state.il.us). To make these comments easier to locate and review, the Board has established a docket R12-23 PC specifically for these comments.

Among the comments identified above, the Board received approximately 1,500 comments originating from Environment Illinois. These comments supported the Board's first-notice proposal on issues including restrictions on manure spreading practices and ensuring "the public's right to know about every factory farm operation across the state. . . ." *E.g.*, PC 3009. A number of these comments included additional remarks. *E.g.*, PC 1896.

Also included in the 3,000 comments identified above were approximately 1,400 comments originating from Food & Water Watch. These comments supported the Board's proposed rules and encouraged the Board to maintain proposed requirements including those pertaining to land application of livestock waste in winter, production areas, and temporary manure stacks. *E.g.*, PC 1779.

In addition, a number of the public comments are in the form of a petition prepared by Environment Illinois, which bears one or more signatures. That document urged the Governor to support "a ban on manure spreading practices that threaten our rivers, streams, or drinking

water” and to “ensure the public’s right to know about every factory farm operation across the state. . . .” *E.g.*, PC 1176.

Finally, the Board also received a number of individual comments, including those filed by Karen Hudson (PC 1770) and Kenneth Turner (PC 1874).

Because of the large number of comments received, the Board will not individually summarize each comment or list each person who filed a comment. This does not mean that the Board has not reviewed the comments nor that the Board did not consider the comments in preparing its second-notice proposal. The Board recognizes the efforts made to prepare and submit these comments and appreciates receiving each of them.

SECTION-BY-SECTION SUMMARY OF ISSUES RAISED IN FIRST-NOTICE COMMENTS AND RESPONSES

Section 501.200(a): Incorporations by Reference

Nutrient Management Standard

USDA – NRCS (PC 30)

United States Department of Agriculture Natural Resources Conservation Service (NRCS) suggested “that the Board consider the use of the current NRCS 590 Nutrient Management Standard” with regard to the development of a nutrient management plan (NMP). PC 30 at 1. NRCS further suggested that the Board include that standard with materials incorporated by reference in this subsection. *Id.*

Agency (PC 3027)

Noting the suggested incorporation by reference, the Agency claimed that NRCS had not indicated how the 590 Nutrient Management Standard differed from the Board’s proposal or how to incorporate the standard into the proposal. PC 3027 at 22; *see* PC 30 at 1. The Agency acknowledged that both the Board’s proposal and the NRCS standard may apply to a facility’s land application area. PC 3027 at 23. However, the Agency argued that, “if there are inconsistencies between the Board’s proposed rule and the 590 standard,” then NRCS can amend the standard as necessary. *Id.* The Agency stated that it did not see a basis to make this suggested revision and recommended that the Board decline to adopt the suggested incorporation. *Id.*

Board Discussion

NRCS has not clearly indicated how the current NRCS 590 Nutrient Management Standard would be helpful for developing an NMP or how the Board should incorporate either elements of or the entire standard into its proposal. NRCS also has not explained how this standard may differ from the Board’s proposed land application requirements or from the

materials the Board proposed to incorporate by reference. Accordingly, the Board declines to add this standard to materials incorporated by reference in this section.

American Society of Agricultural and Biological Engineers Standards

The Agency proposed to update current incorporations by reference to two sets of materials available from the American Society of Agricultural and Biological Engineers (ASABE): Control of Manure Odors (EP379.1 1986) and Design of Aerobic Lagoons for Animal Waste Management (EP403.1 1990). 35 Ill. Adm. Code 501.200(a). The Board submitted these updates to first-notice publication. Board Opinion at 24, 261. The Board has carefully reviewed its Subtitle E Agriculture Related Pollution rules and determined that, with one exception, none of these rules rely on those materials. The one exception is that Section 506.104 of the livestock waste regulations incorporates a 1993 version of standard EP403, and the lagoon design standards in Section 506.204 refer to those materials. *See* 35 Ill. Adm. Code 506.104, 506.204. The Agency did not seek to amend Part 506, and the Board did not include any of those rules in its first-notice proposal. Under these circumstances, the Board finds that it is appropriate to delete the two ASABE standards from the incorporations by reference in Section 501.200(a), and the order below reflects this change.

Section 501.244: Erosion Factor T

Board's First-Notice Proposal

The Board proposed to define “Erosion Factor T” as “[a]n estimate of the maximum average annual rate, in tons per acre per year, of soil erosion by water that can occur without affecting crop productivity over a sustained period.” Board Opinion at 264. The proposal also included a Board Note stating that “Erosion Factor T for Illinois soils is available from the United States Department of Agriculture Natural Resources Conservation Service’s published soil surveys for Illinois at http://soils.usda.gov/survey/printed_surveys/state.asp?state=Illinois&abbr=IL.” *Id.*

In its first-notice opinion, the Board noted that the Agency cited to a website that the Board was unable to access. *See* Board Opinion at 26, 256. The Board requested comment on whether “other material that may be named as an alternative is capable of incorporation by reference under the APA [Illinois Administrative Procedure Act].” *Id.* at 256.

USDA – NRCS (PC 30)

Responding to the Board’s request for comment, NRCS stated that the term should be defined as “an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.” PC 30 at 1, citing Board Opinion at 256. NRCS added that “Illinois soils information, including the T factor” is available on-line through its Web Soil Survey. PC 30 at 1 (listing website).

Agency (PC 3027)

Also responding to the Board's request, the Agency agreed with the Board's changes to the definition. PC 3027 at 20, 21; *see* Board Opinion at 256. However, the Agency argued that the Board Note should not include the NRCS website, which is no longer active. *Id.* at 20. The Agency previously submitted the address of a website containing soil survey data but since determined that it is also inactive. *Id.* Consequently, the Agency recommended a Board Note providing that "Erosion Factor T for Illinois soils is available from the United States Department of Agriculture Natural Resources Conservation Service." *Id.* at 21. The Agency also recommended that the Board not incorporate by reference soil survey data for each county in Illinois. *Id.*

Environmental Groups (PC 3031)

The Environmental Groups stated that they defer to NRCS's expertise on the definition of this term and the source owners and operators should consult regarding it. PC 3031 at 13. The Groups added that they "support the inclusion of those recommendations in the final rule." *Id.*

Board Discussion

The Board based its proposed definition of Erosion Factor T, which does not include erosion by wind, on the Agency's definition of the same term. *See* Board Opinion at 26. The TSD noted that NRCS soil surveys list this factor for each soil type. TSD at 61, citing USDA - NRCS, Soil Survey of Piatt County, Illinois (2010) at 146, 185-191. The Board notes that the NRCS soil survey defines Erosion Factor T as "an estimate of the maximum average annual rate of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year." *Id.* at 146. Accordingly, the Board will amend the definition to include wind erosion to be consistent with the NRCS's definition.

The Agency requested that the Board remove the website address in the Board Note under Section 501.244 due to "instability of referring to NRCS's webpage". PC 3027 at 21. Instead, the Agency recommended that the Board Note indicate that Erosion Factor T for Illinois soils is available from NRCS. While recognizing that website addresses may change over time, the Board believes that including these addresses in Board Notes may be helpful to regulated entities. The Board provides website addresses in Board Notes under proposed Sections 501.360 and 502.840. The Board has also included website addresses for certain documents incorporated by reference in Section 501.200. Accordingly, the Board includes the current website address of NRCS's soil survey website in the proposed Board Note and includes contact information for NRCS's Illinois office.

For second-notice review, the Board amends its proposed definition of "Erosion Factor T" as follows:

[a]n estimate of the maximum average annual rate, in tons per acre per year, of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period.

BOARD NOTE: Erosion Factor T for Illinois soils is available from the United States Department of Agriculture Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign, IL 61821, Phone (217) 353-6676, Services. The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov>~~<http://soils.usda.gov/survey/printed-surveys/state.asp?state=Illinois &abbr=IL>~~.

In addition, the Board amends Sections 502.615(c)(3), 502.620(f), and 502.630(c)(4) to reflect this clarification of the Erosion Factor T. These amendments are reflected in the Board's order below.

Section 501.360: Revised Universal Soil Loss Equation

Board's First-Notice Proposal

The Board proposed to define "Revised Universal Soil Loss Equation" (RUSLE) as

The equation for calculating soil loss due to water erosion as set forth in 7 C.F.R. 610.12 (2013), incorporated by reference in Section 501.200:

$$A = R * K * LS * C * P$$

Where

A is the estimation of average annual soil loss in tons per acre caused by sheet and rill erosion;

R is the rainfall erosivity factor, which accounts for the energy and intensity of rainstorms;

K is the soil erodibility factor, which measures the susceptibility of a soil to erode under a standard condition and adjusts it bi-monthly for the effects of freezing and thawing, and soil moisture;

LS is the slope length and steepness factor, which accounts for the effect of length and steepness of slope on erosion based on the relationship of rill to interrill erosion; and

P is the support practice factor, which accounts for the effect of conservation support practices, such as cross-slop farming, strip cropping, buffer strips, and terraces on soil erosion. Board Opinion at 268.

The proposal also included a Board Note stating that "[s]oil loss may be calculated using Revised Universal Soil Loss Equation 2 (RUSLE2) software program available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm." *Id.*

USDA – NRCS (PC 30)

Responding to the Board’s request for comment on this definition, NRCS stated that the Board correctly cited the source of RUSLE as 7 C.F.R. § 610.12 (2013). PC 30 at 1. NRCS added that the Board had also cited the correct website through which to obtain a copy of official NRCS RUSLE2 software. *Id.*

NRCS suggested adding the following language based on the federal regulation to this definition: “[f]or further information about RUSLE[,] see the U.S. Department of Agriculture Handbook 703, ‘Predicting Soil Erosion by Water: A Guide to Conservation Planning with the Revised Universal Soil Loss Equation (RUSLE).’ Copies may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.” PC 30 at 1. NRCS also suggested that “it would be helpful to add a statement that ‘[s]pecific soils and climate data, and cropping templates for Illinois are available for the program at the RUSLE2 download site’ listed in the draft rule.” *Id.*

NRCS noted that other sections of the Board’s proposal also refer to the RUSLE and suggested that each of these sections should “require the use of RUSLE2, rather than allowing use of former versions of the soil loss model.” PC 30 at 1.

Agency (PC 3027)

The Agency noted that the Board proposed a new definition of RUSLE and also proposed to incorporate by reference the federal rule containing the definition. PC 3027 at 10. Arguing that the incorporation by reference is unnecessary, the Agency recommended striking both the proposed definition and the references to RUSLE from Parts 501 and 502. *Id.* The Agency recommended instead that “the Board require the use of Revised Universal Soil Loss Equation 2 (RUSLE2) modeling software, as initially proposed by the Agency. . . .” *Id.*

The Agency stated that the universal soil loss equation (USLE) “was released in the early 1960s.” PC 3027 at 10. The Agency further stated that in the early 1990s NRCS released RUSLE, which relied on the same equation to predict soil loss due to erosion: $A = R * K * LS * C * P$. *Id.* The Agency reported that RUSLE2, the most recent version of the soil loss equation, was released in 2003. *Id.* at 11; *see id.*, Attachment A. The Agency added that RUSLE2 revised the factors used in the earlier USLE and RUSLE. PC 3027 at 11.

The Agency recommended the use of the RUSLE2 modeling software on various grounds. First, the Agency claimed that “requiring its use is akin to other substantive requirements, and such requirements do not necessitate incorporation by reference or definition.” The Agency argued that a “requirement to use certain specific software is a straight forward substantive requirement and does not require incorporation by reference.” PC 3027 at 13. The Agency further argued that such a requirement does not violate the APA. *Id.* The Agency claimed that “[i]ncorporation-by-reference is a tool that an agency can use to impose the requirements contained in other rules, standards or guidelines, without repeating the requirements in full.” *Id.* The Agency further claimed that regulations can also set forth the full requirements, which would not require incorporation of those requirements. The Agency

suggested that requiring use of the RUSLE2 software codifies the full substantive requirements and avoids the need to incorporate that software by reference. *Id.* at 14. The Agency also claimed that the APA does not prohibit the use of modeling software and that the Board has required the use of modeling. *Id.*, citing 35 Ill. Adm. Code 742.110(c) (Overview of Tiered Approach [to Corrective Action Objectives]).

The Agency continued by arguing that the Board’s proposed definition does not conform to RUSLE2 as used by NRCS. *Id.* at 12. The Agency further argued that the definition “does not properly calculate soil loss by taking into account cover management practices.” *Id.* Finally, the Agency claimed that use of the different versions of the equation will result in different requirements to meet land application requirements. *Id.* Claiming that there may be a 15% variation between them, the Agency stated that it “does not want a CAFO to choose between RUSLE and RUSLE2 depending on which calculation is more favorable.” *Id.*

The Agency stated that, if the Board defines RUSLE2, it recommends the following definition:

The equation for calculating soil loss due to soil erosion is as follows:

$$A = R * K * L * S * C * P$$

Where

A is the estimation of average annual soil loss in tons per acre per year cause by sheet and rill erosion;

R is the climate erosivity factor;

K is the soil erodibility factor, which measures the susceptibility of a soil to erode under a standard condition;

L is a slope length factor, which accounts for the effect of length of slope on erosion;

S is the slope steepness factor, which accounts for the effect of slope steepness on erosion;

C is the cover management factor; and

P is the support practice factor, which accounts for the effect of conservation support practices, such as cross-slope farming, strip cropping, buffer strips, and terraces on soil erosion. PC 3027 at 12-13.

The factors A, R, K, L, C, and P are daily factors in RUSLE2. The RUSLE2 equation sums the daily soil loss over a year using the sum of the equation $a_i = r_i * k_i * l_i * S * c_i * p_i$ to determine annual soil loss. Subscript i represents the value for the ith day in the RUSLE2 equation. S is a constant and is the same each day. The Revised Universal Soil Loss Equation 2 (RUSLE2) software program and support documentation is available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2Index.htm

Environmental Groups (PC 3031)

The Environmental Groups stated that they defer to NRCS's expertise on the definition of this term and the source owners and operators should consult. PC 3031 at 13. The Groups added that they "support the inclusion of those recommendations in the final rule." *Id.*

Board Discussion

The Board continues to believe that requiring the use of a software program without specifying the model equations in the rule is inconsistent with the APA. While the Agency cites the required use of Soil Screening Level, Risk Based Corrective Action, and Johnson & Ettinger models in the Tiered Approach to Corrective Action Objectives (TACO) regulations, this differs from the Agency's proposal. The Board's TACO regulations provide in pertinent part that "[a] Tier 2 evaluation uses the risk based equations from the Soil Screening Level (SSL) model, Risk Based Corrective Action (RBCA) model and modified Johnson and Ettinger (J&E) model documents listed in Appendix C, Tables A, C and L, respectively." 35 Ill. Adm. Code 742.110(c) (emphasis added). The equations are found in the referenced appendix. Furthermore, the TACO rules incorporate by reference the guidance documents for SSL, RBCA and J&E models. *See* 35 Ill. Adm. Code 742.210.

The Board notes that the RUSLE2 software program relies on a system of equations to compute soil loss. *See* Draft User Guide – Revised Universal Soil Loss Equation – Version 2 (Dec. 22, 2004) (RUSLE User Guide) at 30. The primary equation used in the RUSLE2 model is similar to Board's proposed definition of RUSLE, except that it computes soil for a given day rather than an annual soil loss as follows:

$$a_i = r_i k_i l_i S c_i p_i$$

Where:

a_i	=	long-term average soil loss for the <i>ith</i> day
r_i	=	erosivity factor,
k_i	=	soil erodibility factor,
l_i	=	soil length factor,
S	=	slope steepness factor,
c_i	=	cover management factor,
p_i	=	supporting practices factor,

all on the *ith* day, except for slope steepness factor (S). The RUSLE2 User Guide states that "[t]he slope steepness factor S is the same for every day and thus does not have a subscript. To emphasize, values for these factors are long-term averages for a particular day - not for the year, which is the reason that lower case symbols are used rather than upper case as in RUSLE1 and USLE." *Id.*

The average annual soil loss is computed as follows:

Coalition cited a statement made by the House sponsor during a 1999 debate on revision of the LMFA in support of its view that “the LMFA was to be the sole regulatory tool for the siting and location of new farms.” PC 3030 at 20, citing 91st G.A., House Proceedings, Apr. 29, 1999 at 34. The Coalition claimed that the Board’s authority on the issue of setbacks is “subordinate to” the LMFA. PC 3030 at 21. The Coalition added that “the Board cannot establish location or setback standards relevant to livestock management that are not provided for legislatively, either through a separate enabling statute or through the Board’s authority to develop rules consistent with the CWA [Clean Water Act].” *Id.* The Coalition claimed that the federal CAFO rules “have no relationship to location standards” and that there is no statutory authority allowing the Board to adopt them. *Id.*

Environmental Groups (PC 3031)

The Environmental Groups noted that the Board declined to adopt its proposed subsection (h) providing that “[n]o livestock management facility or livestock waste handling facility that commences construction of such facility after the effective date of this Section shall locate within 750 feet of surface waters or within a quarter mile of designated surface drinking water supplies.” PC 3031 at 10. The Groups stated that a discharge from a production area can reach surface water in three ways: “1) dry discharges from poorly managed facilities, 2) precipitation-related discharges from unprotected facilities, [and] 3) facility inundation during flooding.” *Id.* They argued that “[m]istakes, unusual weather, and unpredictable events” make it necessary to add “regulatory safeguards that minimize the chance that unintended discharges from production areas will reach surface waters.” *Id.* The Groups suggested that, without these additional safeguards, protecting those water resources depends too heavily on facilities consistently following best management practices. *Id.* The Environmental Groups requested that the Board again consider proposing this 750-foot setback. *Id.*

The Environmental Groups stated that their proposed subsection (h) and its 750-foot setback sought to reconcile various elements of the record. PC 3031 at 10. First, the Groups cited complaints filed by the Illinois Attorney General alleging “that livestock waste discharges from production areas can a) travel 200 yards (600 feet) overland into surface waters, and b) enter nearby ditches and be detectable 5 miles downstream.” *Id.* Second, the Groups cited “[s]cientific studies documenting that vegetative filter strips and buffers can remove significant amounts of pollutants in livestock waste.” *Id.* The Groups noted that Dr. James had cited a review of the literature demonstrating that, “in some cases, pollutant reduction can be very effective in vegetative treatment areas of less than 100 feet long. . . .” *Id.*, citing R.K. Koelsch, *et al.*, *Vegetative Treatment Systems for Management of Open Lot Runoff: Review of literature*, APPLIED ENGINEERING IN AGRICULTURE, Vol. 22(1), 141-53 (2006). Third, the Groups also noted setbacks enacted by other states. *Id.* at 11. The Environmental Groups stated that their review of these elements led them to conclude that their proposed setbacks “represent a fair balance between protecting both the unsuspecting public downstream and the environment while not being overly burdensome on livestock operators.” *Id.*

The Environmental Groups noted that the Board’s first-notice opinion and order referred to two existing regulatory location requirements that protect production areas from flooding. The Groups sought to explain “what little protection these two requirements offer.” PC 3031 at

11. First, Section 13(b)(1) of the LMFA establishes that “[n]o new non-lagoon livestock management facility or livestock waste handling facility may be constructed within the floodway of a 100-year floodplain.” PC 3031 at 11, citing 510 ILCS 77/13(b)(1) (2012). The Environmental Groups argued that this requirement provides little protection. PC 3031 at 11. They claimed that “Federal Emergency Management Agency (FEMA) maps are used to determine whether proposed livestock facilities fall within the 100-year floodplain. Unfortunately, FEMA maps are not necessarily accurate or complete and should not be interpreted to mean that out-of-channel flooding will not happen in areas where no flood hazard area is drawn.” *Id.* The Environmental Groups claimed that FEMA maps emphasize urban areas and larger streams so that “many rural headwater and small order streams do not have mapped floodplains.” *Id.* The Groups added that even mapped boundaries of 100-year floodplains “are not necessarily accurate because sometimes they are not based on engineering studies, but rather other available information such as historic observations.” *Id.*

Second, the Environmental Groups also noted the Board’s reference to the requirement that new facilities “located within a 10-year flood height as recorded by the United States Geological Survey or as officially estimated by the Illinois State Water Survey shall be protected against such flood.” PC 3031 at 11, citing 35 Ill. Adm. Code 502.402(b). The Groups stated that “[t]he 10-year flood elevation in many cases has not been determined, because a technical study has not been conducted previously to compute it. As with 100-year floodplain mapping, this is particularly true of rural areas and small streams.” PC 3031 at 11. The Groups claimed that it is not clear whether the Agency actually implements this requirement. *Id.* at 12.

The Environmental Groups argued that “a minimum siting setback from surface waters is important not only to prevent flooding of livestock facilities, but also to prevent discharges from production areas during non-flood events.” PC 3031 at 12. The Groups noted that the Board’s first-notice opinion and order cited proposed requirements expected to reduce the risk of production area discharges to surface waters. *Id.*, citing Board Opinion at 201. While the Groups acknowledged that proposed Section 501.404 addressing temporary manure stacks applies to all operations, they argued that some of those operations rely on other waste storage structures. PC 3031 at 12. The Groups also argued that other proposed requirements apply only to permitted facilities or unpermitted large CAFOs claiming the agricultural stormwater exemption. PC 3031 at 12. The Environmental Groups claimed that surface waters “should be protected from new livestock facilities not subject to the production area management practice proposed” in the Board’s first-notice opinion and order. *Id.*

The Environmental Groups noted the Board’s statement that the proposed subsection (h) setback “contains no requirement that the setback include vegetative filter strips or buffers.” PC 3031 at 12. While the Groups stated that they would strongly support a requirement that setbacks include a vegetative buffer, they acknowledged that “[s]uggesting a minimum buffer size is challenging given that a number of site-specific factors influence buffer effectiveness (*e.g.*, vegetation type and density, slope, soil infiltration rate, waste volume and characteristics).” *Id.* The Groups indicated that NRCS developed a standard for treatment of agricultural wastewater. *Id.* at 13, citing PC 3030, Attachment 3 (Code 635: Vegetated Treatment Area). The Groups claimed that, while this NRCS standard intends to treat contaminated runoff only from small operations, “[t]he minimum size of the vegetated treatment area is 100 feet.” PC

3031 at 13, citing PC 3030, Attachment 3 at 2. Based on this standard and studies they had cited, the Environmental Groups stated that “the best approach would be to require a 100-foot vegetative buffer within the 750-foot (or quarter-mile) setback. If the Board deems this proposal too restrictive, then a stand-alone vegetative buffer requirement would be better than nothing at all.” PC 3031 at 13.

The Environmental Groups noted the Board’s comment “that the record does not address the economic impact” of the proposed production area setback. PC 3031 at 13. The Groups stated that they obtained an economic analysis of that proposal. *Id.*; see PC 3030, Attachment 4. The Groups’ summary of that analysis stated, “because such a small percentage of Illinois’ agricultural acreage falls within 750 feet of surface waters, that any economic impact of a siting setback on new livestock facilities would be negligible.” PC 3031 at 13. The Groups also noted the conclusion that “setbacks are expected to have a positive economic impact on downstream water users because of the expected improvement in water quality.” *Id.* The analysis concluded with the anticipation “that the setback rules will have a strictly positive economic impact. . . .” PC 3031, Attachment 4.

Agricultural Coalition Response (PC 3040)

The Agricultural Coalition contended that the Board already considered the Environmental Groups’ testimony and evidence in rejecting the inclusion of setbacks in the Board’s first notice opinion and order. PC 3040 at 5. They argued that the Environmental Groups did not provide any new relevant information in their first notice comments. *Id.* The Coalition supported the Board’s finding that there is no basis in the record for the modification of any setbacks in this rulemaking. *Id.*

The Agricultural Coalition argued that the economic impact opinion relied on by the Environmental Groups is speculative and “unaccompanied by any substantive analysis, data sets, or in-depth reasoning.” PC 3040 at 5. The Coalition claimed that the opinion therefore does not “provide the Board with any new relevant information upon which to change its previous decision.” *Id.* The Agricultural Coalition also noted that the opinion has “not been subjected to the type of participant analysis and investigation that is common and expected in Board regulatory proceedings.” *Id.* at 6.

The Agricultural Coalition stated that “the Environmental Groups do not appear to appreciate that a variety of different factors are considered in farm siting.” PC 3040 at 6. The Coalition claimed that the siting criteria in the LMFA “are in addition to the practical considerations that farmers use to evaluate a potential site.” *Id.* The Agricultural Coalition concluded that the additional regulations requested by the Environmental Groups would “increase the burden on farmers in the process of siting a facility, unnecessarily add to the list of required regulatory considerations, and reduce the number of sites that are available for production.” *Id.*

Board Discussion

The Environmental Groups argued that their proposed additional setbacks would help to protect surface waters from unintentional discharges from production areas of livestock management and waste handling facilities. In their first-notice comments, the Groups characterized their proposal as an appropriate balance between surface water protection and the burdens on owners and operators of livestock facilities. The Groups expressed doubt that existing location standards and proposed production area requirements provided adequate protection from these discharges.

The Environmental Groups acknowledged that proposed Section 501.404 addressing temporary manure stacks would apply to all operations, and the Board continues to believe that this provision would improve protection of surface waters. The Board also expects production area requirements applicable to permitted facilities or unpermitted large CAFOs claiming the agricultural stormwater exemption to reduce the risk of discharges to surface waters.

Although the Environmental Groups favored requiring vegetative buffers within setbacks, the Board notes the Groups' recognition that numerous site-specific factors make it very challenging to draft requirements that would establish effective buffers. The Groups cited an NRCS standard addressing this issue. However, that standard is not in the record of this proceeding and has not been the subject of testimony or other comment. In addition, the Groups indicated that it addresses only smaller operations.

The Board also notes that the Environmental Groups obtained an economic analysis of their proposed amendment. While the Board recognizes that the Groups are likely to have obtained this analysis in a short period of time, it cannot overlook the author's acknowledgement of providing "a quick analysis" that "is not a rigorous economic study." Also, the analysis indicates that the proposed setbacks would apply only to a negligible portion of the total land available for potential construction of livestock facilities, suggesting that the proposed setbacks may have very limited or even no application to the location of new facilities. In light of these factors, the Board cannot conclude that this analysis provides significant support to the proposed additional setbacks.

The Board appreciates the Environmental Groups' extensive comments and supporting information on this issue. Having carefully reviewed those comments and information, however, the Board is not persuaded to adopt the Groups' proposed Section 501.402(h). As at first notice, the Board believes that its proposal as a whole provides appropriate and significant protection from the risk of discharges from production areas to surface waters.

Section 501.404(b)(3): Handling and Storage of Livestock Waste

Board's First-Notice Proposal

The Board proposed to add a subsection (b)(3) providing in its entirety that "[a] temporary manure stack shall be constructed or established and maintained in a manner to prevent runoff and leachate from entering surface waters or groundwaters. A cover and pad or

other control must be provided to prevent runoff and leachate from entering surface waters and groundwater.” Board Opinion at 273.

The Agency’s original proposal had required that “[a] cover and pad or other control must be provided when needed to prevent runoff and leachate from entering surface waters and groundwater.” See Board Opinion at 36-37, 204-06 (emphasis added).

Agricultural Coalition (PC 3030)

The Agricultural Coalition noted that the Agency’s original proposal would have required that control of a temporary manure stack must be provided “when needed.” PC 3030 at 12; see Board Opinion at 204-06. The Coalition argued that the Board’s revision would impose significant costs on facilities by requiring controls even where they are not needed. PC 3030 at 13.

Noting that this revision particularly affects dairy operations, the Agricultural Coalition submitted the affidavit of Mr. Don Berlage, a dairy farmer who is also an official of the Illinois Milk Producer’s Association and the Jo Daviess County Farm Bureau. PC 3030 at 13; see *id.*, Attachment C. Mr. Berlage explained that smaller dairies typically employ manure stacks during the summer “when rainfall is relatively low.” PC 3030, Attachment C at 1 (¶8). He added that “farmers will stack manure in pastures or hayfields, which are natural vegetative filter strips,” until it can be land applied. *Id.* He stated that pad construction costs could total \$10,000 and would also take land out of production. *Id.* at 2 (¶¶9, 10).

The Agricultural Coalition argued that these stacks “cannot be presumed to cause a discharge” without controls. PC 3030 at 14. The Coalition stressed that the Board’s proposal provides that “[a] temporary manure stack is a potential secondary source, as defined by the Act. As a potential secondary source, a temporary manure stack is subject to the minimum setback zones established in Title IV of the Act.” Board Opinion at 272; see PC 3030 at 14, citing 415 ILCS 5/14 *et seq.* (2012). The Coalition claimed that requiring controls where setbacks are already established “is simply not justified for environmental protection.” PC 3030 at 14. The Coalition requested that the Board add the term “when needed” to Section 501.404(b)(3). *Id.*

Board Discussion

Both the Agency’s original proposal and the Board’s first-notice proposal require that “[a] temporary manure stack shall be constructed or established and maintained in a manner to prevent runoff and leachate from entering surface waters or groundwaters.” The participants have not challenged or proposed to amend or strike this language.

The Board’s proposed subsection (b)(3) continues by effectuating this requirement: “[a] cover and pad or other control must be provided to prevent runoff and leachate from entering surface waters and groundwater.” Mr. Berlage’s affidavit in support of the Agricultural Coalition addressed the cost of constructing an impermeable clay or concrete pad. However, the Board notes that its proposal does not require a facility to use a cover and pad to comply with this requirement. If a facility handles or stores waste with a temporary manure stack, an “other

control” may be used to ensure that runoff and leachate from the stack do not enter surface waters and groundwater. Conceivably, the stack’s location could be a control sufficient to ensure this.

The Board continues to believe that the Agency’s original proposal to require a cover and pad or other control “when needed” is vague and subjective. *See* Board Opinion at 206. The Board stressed that the Agency’s proposal did not clearly identify how to determine whether control was needed. *Id.* No comment or response addressed this uncertainty or proposed language addressing it. The Board has simply provided that, if a facility builds and maintains a temporary manure stack, it must prevent runoff and leachate from entering surface waters and groundwater by providing a cover and pad or other control. Also, the proposed requirement for manure stacks provided one reason for the Board to decline the Environmental Group’s proposed expansion of production area setbacks in Section 501.402. *See* Board Opinion at 201. In light of these factors, the Board declines to adopt the Agricultural Coalition’s recommendation.

Section 501.404(d): Runoff Field Application Systems

Board’s First-Notice Proposal

The Board proposed to amend existing Section 501.404(d) as follows:

Any livestock management facility not meeting the definition of a CAFO in Section 501.238 may construct and operate a runoff field application system for the treatment of livestock waste from fewer than 300 animal units, meeting the requirements of 35 Ill. Adm. Code 570, in lieu of utilizing liquid manure-holding tanks, holding ponds, or lagoons in compliance with subsection (c), or other livestock waste-handling systems which would assure compliance with the Act and 35 Ill. Adm. Code.Subtitle E. Board Opinion at 274.

USDA – NRCS (PC 30)

NRCS stated that it offered “several recommendations to help small livestock producers in our state and to clarify the intent” of this language. PC 30 at 1.

First, NRCS noted that Section 501.404(d) applies to “the treatment of livestock waste from fewer than 300 animal units.” PC 30 at 1, *see* 35 Ill. Adm. Code 501.404(d). NRCS argued that “[i]t may be beneficial to allow the runoff field application system to be used to treat dilute runoff from feedstock (such as hay bales) as well.” PC 30 at 1-2. NRCS claimed that “[t]his would serve to reduce containment and land application costs for small producers who do not have covered feed storage areas.” *Id.*

Second, NRCS stated that Section 501.404(d) as written provides “for a single runoff field application system per eligible livestock management facility.” PC 30 at 2. NRCS claimed that “[i]t may be beneficial to allow more than one runoff field application system to be constructed and operated on an eligible livestock management facility, as long as each serves no more than 300 animal units.” *Id.* NRCS also claimed that this could allow the use of a runoff field application system for feedstock separate from a system for livestock waste. *Id.*

Third, NRCS argued that facilities classified as a Medium CAFO may implement an improvement plan so that they no longer meet the definition of a CAFO. PC 30 at 2. NRCS noted that this plan may include a runoff field application system. *Id.* NRCS indicated that a facility may become a non-CAFO and eligible to operate such a system once the improvement plan is implemented if the rules allow “this type of predictive eligibility.” *Id.* NRCS proposed that this subsection expand eligibility to include “any livestock management facility not meeting the definition of a CAFO in Section 501.238 when the runoff field system is in place.” *Id.*

Agency (PC 3027)

The Agency first responded to NRCS’s suggestion that “runoff field application systems be allowed for use at uncovered feed storage areas.” PC 30 at 1-2; *see* PC 3027 at 23. The Agency stated that the Board’s proposal allows use of these systems by facilities meeting various regulatory criteria. PC 3027 at 23. The Agency cautioned, however, “that use of the runoff field application system for controlling runoff from feed storage areas that contain silage will likely require design and operation consideration to address the relatively high concentrations of pollutants that can be generated from silage as compared to typical open feedlot runoff.” *Id.*

The Agency next responded to NRCS’s suggestion that the Board allow more than one runoff field application system to be installed at a facility. PC 3027 at 23; *see* PC 30 at 2. The Agency responded that “[t]he Board’s proposed rule allows the installation of more than one runoff field application system at livestock management facilities that are not CAFOs.” PC 3027 at 23-24.

Third, the Agency addressed NRCS’s proposal to expand eligibility for these systems to include facilities that do not meet the definition of a CAFO once the system is installed. PC 30 at 2. The Agency responded that “[r]unoff field application systems at large or medium CAFOs that discharge are subject to NPDES permit requirements. Runoff field application systems under Section 501.404 for non-CAFOs have different requirements than found in proposed Part 502 for large or medium CAFOs.” PC 3027 at 24. The Agency added that a discharge from an unpermitted system “at a medium-sized facility may cause that facility to be defined as a medium CAFO. This CAFO would not meet Part 502, and the CAFO would be discharging without the required CAFO NPDES permit.” *Id.* The Agency argued that the Board’s proposal “ensures that facilities will not install runoff field application systems that subsequently discharge, causing the facility to need a NPDES permit that has a different set of livestock waste storage, handling and land application requirements.” *Id.*, citing SR at 38, TSD at 3. The Agency concluded by recommending that the Board decline to adopt NRCS’s proposal regarding eligibility to install a runoff field application system. PC 3027 at 24.

Board Discussion

The Board first notes that it adopted Section 501.404(d) in 1991 and has not since amended it. Amendments to Agriculture Related Pollution: Title 35: Subtitle E, Chapter 1, Part 501, R 90-7, slip op. at 15-17, 29 (June 20, 1991). The Board’s 1991 adoption order stated that the Agency had proposed subsection (d) based on a “recognition that runoff field application

systems, specifically vegetative filters, if properly designed and operated, can effectively treat waste produced by smaller facilities. . . .” *Id.* at 15. In this docket, the Agency’s original proposal and the Board’s first-notice proposal sought to amend subsection (d) only by adding language limiting these systems to “facilities not meeting the definition of a CAFO in Section 501.238.”

NRCS argued that it “may be beneficial” also to allow runoff field application systems to treat runoff from feedstock. Although the Board notes NRCS’s comment that this may reduce costs for small producers lacking covered feed storage areas, the Agency cautioned that feedstock may have higher concentrations of pollutants than typical feedlot runoff. The Agency also cited design and operation considerations that may be necessary to address runoff from feed storage. As the record does not address these factors, the Board declines to expand this option as suggested by NRCS.

NRCS also suggested that subsection (d) could allow a facility to construct and operate more than one runoff field application system as long as each them served no more than 300 animal units. The Board notes the Agency’s comment that the first-notice proposal allows more than one system at a facility that is not a CAFO. NRCS also claimed that allowing more than one system would allow separate systems for waste and feedstock. However, the Board declined above to expand this option to allow runoff field application systems to treat runoff from feedstock. Based on these factors, the Board declines to amend subsection (d) to reflect this suggestion by NRCS.

Finally, NRCS noted that a facility classified as a Medium CAFO may construct a runoff field application system so that it no longer meets the definition of a CAFO and therefore becomes eligible to operate the system. NRCS proposed that subsection (d) allow this “predictive eligibility.” The Agency responded that non-CAFOs operating runoff field application systems under Section 501.404 face different requirements than Large or Medium CAFOs under Part 502. The Agency argued that the Board’s first-notice proposal helps to ensure that facilities will not install systems at facilities that later discharge, which would cause those facilities to require an NPDES permit with different requirements.

The Board appreciates NRCS’s intention to help small livestock producers and its attempt to clarify this language. However, for the reasons cited above, the Board declines to amend its first-notice proposal to incorporate NRCS’s suggestions.

Section 501.405(a): Field Application of Livestock Waste

Board’s First-Notice Proposal

The Board proposed to amend existing Section 501.405(a) as follows:

For livestock management facilities and livestock waste handling facilities that are not required to obtain an NPDES permit, the quantity of livestock waste applied on soils shall not exceed a practical limit as determined by soil type, especially its permeability, the condition (frozen or unfrozen) of the soil, the

percent slope of the land, cover mulch, proximity to surface waters and likelihood of reaching groundwater, and other relevant considerations. These livestock waste application guidelines will be adopted pursuant to Section 502.305, unless otherwise provided for by Board regulations. Facilities required to obtain an NPDES permit are subject to the requirements in Subpart F of Part 502. Unpermitted Large CAFOs claiming an agricultural stormwater exemption must comply with Sections 502.102 and 502.510(b). Board Opinion at 274.

Agricultural Coalition (PC 3030)

The Agricultural Coalition noted the Board's statement regarding unpermitted Large CAFOs and the agricultural stormwater exemption that "USEPA intended for the federal rules to allow flexibility and finds it reasonable that the Illinois rules maintain this flexibility." Board Opinion at 169; *see* PC 3030 at 14-15. The Coalition also noted Agency testimony that "the method of compliance is flexible because the facility operator will know the best way to comply at the particular facility and because the various technology available to an operator will be utilized in different ways at different facilities." PC 3030 at 15, citing Tr.1 at 155-56.

The Agricultural Coalition agreed with the Board's recognition of this flexibility but argued that proposed Section 501.405 constrains it. PC 3030 at 15. The Coalition questioned whether, "if a large unpermitted CAFO 'must comply with' Section 502.102 and 502.510(b), as required by Section 501.405(a), then does that mean the CAFO can only avail itself of the agricultural stormwater exemption for land application by specifically implementing a nutrient management plan as required by Section 501.405?" PC 3030 at 15.

In addition, the Agricultural Coalition expressed the belief that "it is wrong to limit application of the agricultural stormwater exemption to land application. . . ." PC 3030 at 15. The Coalition claims that, in Alt v. U.S. Env'tl. Prot. Agency, 2013 WL 4520030 (N.D.W.Va. 2013), "the court found that 'litter and manure washed from the Alt farmyard to navigable waters by a precipitation event is an agricultural stormwater discharge, thereby rendering it exempt from the NPDES permit requirements of the Clean Water Act'." PC 3030 at 15. The Coalition claimed that the court did not accept USEPA's position that "the exemption only applied to discharges from land application areas under the control of the CAFO." *Id.* at 15-16, citing Alt at 6. The Coalition argued that this broader scope for the exemption should be reflected in the Illinois rules. PC 3030 at 16.

The Agricultural Coalition claimed that this broader scope necessitates revision of Section 501.405 "to ensure that the records to be kept are for land application scenarios only." PC 3030 at 16. Specifically, the Coalition favored clarification that "records demonstrating compliance with technical standards are required only if the agricultural stormwater exemption is claimed for land application." *Id.* In addition, the Coalition proposed additional "language that allows a CAFO to claim an agricultural stormwater exemption for those areas that are neither the production area nor the land application area, as clarified by the Alt decision." *Id.*

The Agricultural Coalition proposed to amend the final sentence of Section 501.405(a) as follows: "[u]npermitted Large CAFOs claiming an agricultural stormwater exemption for field

application must ~~comply with~~ keep records consistent with Section 502.102 and 502.510(b).” PC 3030 at 16.

Environmental Groups’ Response (PC 3041)

The Environmental Groups contended that the federal rules require a CAFO to comply with minimum elements set forth in 40 C.F.R. § 122.42(e)(1)(vi-ix) in order to qualify for the agricultural stormwater exemption. PC 3041 at 1. The Environmental Groups also contended that keeping records documenting implementation of the minimum elements “is an additional requirement for qualification for the exemption under the federal rule.” *Id.* The Environmental Groups claimed that “[a]n Illinois rule that requires only record keeping is clearly not consistent with the federal CAFO rule, not to mention nonsensical.” *Id.* The Environmental Groups further claimed that Section 502.510(b) already provides “great flexibility.” *Id.* at 1-2. Further, “many of the requirements in 502.510(b) provide basic, fundamental protections for water quality and people.” *Id.* at 2.

The Environmental Groups noted that,

[a]lthough the [Agricultural] Coalition cites the Alt case to support its expansion of the agricultural stormwater exemption to additional land areas, even the discharges from the farmyard that qualified for the agricultural stormwater exemption in the Alt case were subject to the federal minimum elements regarding agricultural stormwater discharges. PC 3041 at 2.

The Environmental Groups also noted that the Board has had no opportunity to hear testimony from witnesses regarding the implications of expanding the agricultural stormwater exemption. *Id.* The Environmental Groups described the provisions of Section 502.510(b) as “basic best management practices to control water pollution.” *Id.* The Environmental Groups requested that the Board retain the language proposed at first notice in Sections 501.405, 502.500, and 502.600. *Id.*

Agency Response (PC 3042)

The Agency requested that the Board reject the Agricultural Coalition’s proposal because it would make Illinois’ regulations less stringent than the federal rule. PC 3042 at 1. The Agency argued that adoption of this proposed language may lead USEPA to reject the rules. *Id.* The Agency noted that, under the federal CAFO rule, a large unpermitted CAFO claiming the agricultural stormwater exemption “must comply with all the requirements listed in 40 C.F.R. §§ 122.42(e)(1)(vi)-(ix). . . .” *Id.* at 1-2. The Agency recognized that the Agricultural Coalition may be concerned that the Board’s proposal might require an unpermitted large CAFO to have a nutrient management plan, but the Agency disagreed with this position. *Id.* at 2. However, the Agency agreed with the Agricultural Coalition that unpermitted large CAFOs should have flexibility in meeting the requirements of Sections 502.102 and 502.510(b) to claim the agricultural stormwater exemption. *Id.*

The Agency also opposes the Agricultural Coalition's proposed Section 501.405(a) because the language is based on unsettled case law. *Id.* at 3-4, citing Alt v. USEPA, No. 13-2534 (4th Cir. Dec. 23, 2013) and Chesapeake Bay Foundation v. Alt, No. 13-2200 (4th Cir., filed Sept. 27, 2013). The Agency claimed that, if the Board includes the Agricultural Coalition's proposed language, and the Fourth Circuit Court of Appeals reverses the district court, the Board's regulation will contradict federal law. *Id.* at 4.

The Agency therefore requested that the Board decline to adopt the Agricultural Coalition's proposed language and instead proposed the following changes to the Board's first notice language:

- a) For livestock management facilities and livestock waste handling facilities that are not required to obtain an NPDES permit, the quantity of livestock waste applied on soils shall not exceed a practical limit as determined by soil type, especially its permeability, the condition (frozen or unfrozen) of the soil, the percent slope of the land, cover mulch, proximity to surface waters and likelihood of reaching groundwater, and other relevant considerations. These livestock waste application guidelines will be adopted pursuant to Section 502.305, unless otherwise provided for by Board regulations. Facilities required to obtain an NPDES permit are subject to the requirements in Subpart F of Part 502. Unpermitted Large CAFOs claiming an agricultural stormwater exemption must comply with Sections 502.102 and the requirements listed in Section 502.510(b).

Board Discussion

The Board first notes that its proposed amendments to Section 501.405(a) stem from the Agency's original proposal that "[l]arge unpermitted CAFOs must comply with Sections 502.102 and 502.510(b)." The Agricultural Coalition asks whether an unpermitted Large CAFO that "must comply with Section 502.102 and 502.510(b)" under this subsection can only claim an agricultural stormwater exemption for land application by implementing an NMP. PC 3030 at 15. The Board believes that its first-notice opinion squarely addressed the Agricultural Coalition's question. Discussing Section 502.102 in that opinion, the Board found "that the Agency's proposal to require unpermitted Large CAFOs to comply with the practices listed in Section 502.510(b) to qualify for the agricultural stormwater exemption is appropriate." Board Opinion at 166. The Board added that "the Agency's proposed Section 502.510(b) appropriately addresses the form, source, amount, timing, and method of application to establish protocols for land application of livestock waste applicable to unpermitted Large CAFOs that seek to claim the agricultural stormwater exemption." *Id.* In addition, the Board's first-notice opinion and order noted USEPA's explanation "that unpermitted Large CAFOs need to demonstrate use of certain nutrient management practices to claim the exemption, but they may do so by following technical standards established to comply with 40 C.F.R. 122.42(e)(viii) or follow other standards." Board Opinion at 169, citing 73 Fed. Reg. 70418, 70435 (Nov. 20, 2008). The Board also noted USEPA's indication that facilities following other standards "may have to demonstrate both the appropriateness of alternative standards and that its practices conformed to them." Board Opinion at 168, citing 73 Fed. Reg. 70418, 70435 (Nov. 20, 2008).

The Agricultural Coalition proposed to amend the final sentence of subsection (a) to provide that unpermitted Large CAFOs claiming the agricultural stormwater exemption must only “keep records consistent with Section 502.102 and 502.510(b).” The Board declines to accept this proposed language, as the exemption requires compliance with practices and standards and not merely recordkeeping. In this regard, the Board notes the Agency’s view that the Coalition’s proposed language would make Illinois’ rules less stringent than the federal regulations and may cause USEPA to reject the rules.

In addition, the Agricultural Coalition cited Alt v. U.S. Env’tl. Prot. Agency, 2013 WL 4520030 (N.D.W.Va. 2013), to argue that application of the agricultural stormwater exemption should not be limited solely to land application of livestock waste. The Board agrees with the Agency that the Coalition’s proposal is based upon unsettled case law. In addition, the Coalition’s proposal appears to apply the exemption to any discharge of agricultural stormwater but require best management practices only if this discharge results from land application. In this regard, the Board notes that the practices in Section 502.510(b) do not only address land application. Subsection (b)(5), as one example, refers to diversion of clean water from the production area. Accordingly, the Board declines to adopt the Coalition’s language addressing the scope of the exemption.

Nonetheless, the Board recognizes that the final sentence of its proposed subsection (a) may benefit from clarification consistent with the discussion above. For second notice, the Board proposes to provide that “unpermitted Large CAFOs claiming an agricultural stormwater exemption must comply with Section 502.102 and the practices listed in Section 502.510(b) to qualify for the exemption.” The order below reflects this revision.

Section 501.505: Requirements for Certain CAFOs to Submit Information

Board’s First-Notice Proposal

The Board proposed to add this section to require unpermitted Large CAFOs to submit certain identifying information to the Agency.

LWVI (PC 3028)

LWVI argued that the Board’s order had improved the Agency’s proposal but claimed that it “is still insufficient for compiling a more complete and current inventory.” PC 3028 at 2. LWVI stated that subsection (a)(1) requires submission of information by “Large CAFOs not covered by an NPDES permit, but there is no obligation to update this information.” *Id.* LWVI added that subsection (a)(2) exempts Medium CAFOs “*unless* they propose to increase their animal population.” *Id.* (emphasis in original).

LWVI first argued that subsection (a)(1) should “include a requirement to update information supplied by unpermitted Large CAFOs every four years.” PC 3028 at 3. LWVI also proposed revising subsection (a)(2) to require that CAFOs with the same or fewer animals as the number in Section 502.103 must submit specified information within 90 days of the effective

date of the regulations and update it every four years. *Id.* LWVI suggested that these requirements would improve the Agency’s “ability to identify possible sources of nuisance odors and better respond to citizen complaints.” *Id.*

Agricultural Coalition (PC 3030)

Board Authority. The Agricultural Coalition argued that the proposed requirement to submit information is not required by the federal rule and therefore exceeds the Board’s authority in this rulemaking. PC 3030 at 5, citing Agency Memo. at 6. The Coalition further argued that Illinois law does not allow the Board to adopt a rule requiring the Agency “to create and administer a reporting and/or registration program for entities that are not required to be permitted.” PC 3030 at 5, citing Agency Memo. at 5-6.

The Agricultural Coalition noted the Board’s recognition that USEPA had proposed and then withdrawn a federal reporting rule. PC 3030 at 5, citing Board Opinion at 180-81; *see* 77 Fed. Reg. 42679 (July 20, 2012), 76 Fed. Reg. 65431 (Oct. 21, 2011). The Coalition suggested that the Board’s rulemaking authority is limited to implementing the CWA program. The Coalition further suggested that, in the absence of a federal requirement to submit information, the Board lacks authority to adopt one. PC 3030 at 5. Addressing state law, the Agricultural Coalition argued that there is no specific authority providing the Board authority to require submission of information. *Id.* The Coalition further argued that the Board’s general rulemaking authority “is not so broad as to allow for the promulgation of this requirement in this context.” *Id.* The Coalition suggested that the Board must have specific legislative authorization in order to adopt a requirement of this nature. *Id.*, citing Agency Memo. at 6.

Support in Record. The Agricultural Coalition noted that the Board had found “significant gaps” in the information available to the Agency for compiling a CAFO inventory. Board Opinion at 184; *see* PC 3030 at 6. The Coalition acknowledged that, at the time the Agency developed its proposed rules, it “did not have a comprehensive inventory of CAFOs.” PC 3030 at 7; citing SR at 90. The Coalition claimed that the Agency agreed in a February 2011 work plan to amend the Board’s rules and “to include in these amendments a registration program for large CAFOs.” PC 3030 at 7, citing Attachment A (Illinois Program Work Plan Agreement Between Illinois EPA and Region 5, U.S. EPA). The Coalition further claimed that the Agency’s May 2011 draft rules reflected this agreement and proposed a registration requirement. PC 3030 at 7.

The Agricultural Coalition also stated that the February 2011 work plan included an agreement that the Agency would “develop a plan to create and maintain a comprehensive inventory.” PC 3030 at 7, citing Attachment A at 7. The Coalition stated that the Agency planned to “consult with the Illinois Department of Agriculture, Illinois Emergency Management Agency, and Illinois Department of Public Health for information these departments have on large CAFOs.” *Id.* The Coalition further stated that the Agency would then use this information and its own records to compile an inventory. *Id.* The Agricultural Coalition claimed that, when USEPA withdrew its proposed reporting rule, the Agency “had made enough progress on its comprehensive inventory that it no longer considered a registration program necessary.” PC 3030 at 7, citing Tr.1 at 73, 110-13. The Coalition argued that a renewed work plan in February

2013 no longer required a registration program. PC 3030 at 7, citing Attachment B (Illinois Program Work Plan For 2013 Water Programs). The Coalition stated that the Agency instead agreed “that it would continue to update the CAFO inventory, regularly submit the inventory to USEPA and make the inventory publicly available.” *Id.* The Coalition expressed the understanding that the Agency “is poised to meet that agreement with USEPA.” PC 3030 at 7. The Coalition concluded that “there are not significant gaps in the inventory.” *Id.* at 8.

The Agricultural Coalition noted that the Board’s proposal required an owner of an unpermitted large CAFO to submit specified information. PC 3030 at 8, citing Board Opinion at 275-76. The Coalition stated its understanding that the Agency “currently has this information for the CAFOs in its inventory.” PC 3030 at 8. The Coalition argued that the Board’s proposal is unnecessary “because it does not require the submission of new information.” *Id.*

The Agricultural Coalition argued that the Board’s proposed Section 501.505 is not supported by evidence in the record. PC 3030 at 9. The Coalition further argued that the Agency had not proposed it and did not offer evidence to support it. *Id.* They added that, although the Environmental Groups supported the rule, they had not provided evidence showing that it will help achieve its purposes of identifying dischargers, bringing dischargers into compliance, and identifying causes of discharges and fish kills. *Id.*, citing Board Opinion at 178. The Agricultural Coalition claimed that “[w]hen the Board’s record reflects that *only* the environmental interest groups (and *not* the state regulatory authority) assert a need for such information, the need for such requirement (from a regulatory perspective) simply has *not* been demonstrated.” PC 3030 at 10 (emphasis in original).

Burden on CAFOs. The Agricultural Coalition argued that the Board’s proposed Section 501.505 requirement “is unduly burdensome.” PC 3030 at 9. The Coalition stated that it “wholeheartedly opposes the collection of personal information of CAFO owners or operators. . . .” *Id.* at 9-10. The Coalition claimed that “[i]t is not the state’s responsibility, nor should it be the state’s goal, to require private businesses, outside the scope of required permitting, to report certain information in order to maintain an adequate ‘data base’ of information perceived to be important to environmental groups.” *Id.* at 10.

The Agricultural Coalition argued that, “if an entity is not required to obtain a permit, it should not need to conform to regulations which require it to provide information about its operations to the state.” *Id.* at 11. The Coalition claimed that “[i]t should be sufficient that if the facility is discharging, it is required to get a permit and disclose appropriate information. If it is not [discharging], it is not subject to regulation, via reporting obligation or otherwise, in the NPDES permitting rules.” *Id.* at 10, citing Nat’l. Pork Producers Council v. USEPA, 635 F.3d 738 (5th Cir. 2011) (Pork Producers). The Coalition argued that the Board’s proposed requirement requiring submission of information by facilities that are not discharging “is similar to the permitting required by federal rules that were struck down. . . .” PC 3030 at 11, citing Nat’l. Pork Producers Council v. USEPA, 635 F.3d 738 (5th Cir. 2011); Waterkeeper Alliance v. USEPA, 399 F.3d 486 (2nd Cir. 2005); 68 Fed. Reg. 7176 (Feb. 12, 2003). The Agricultural Coalition concluded that the requirement to submit information “appears to serve little purpose other than to provide potential fishing expedition opportunities to those seeking to hurt farmers

by filing lawsuits, since all of the required information would be subject to public release through the Freedom of Information Act.” PC 3030 at 10.

Proposed Language. The Agricultural Coalition urged the Board to adopt the following language originally proposed by the Agency for second notice:

- a) The requirements of this Section must be met if the United States Environmental Protection Agency adopts a regulation pursuant [to] Section 308 of the Clean Water Act [33 U.S.C. 1318] that requires submittal of information from one of more categories of CAFOs.
- b) Any CAFO required to submit information under a final rulemaking pursuant to Section 308 of the Clean Water Act described in subsection (a) of this Section, must comply with the requirements of that regulation unless such requirements are overturned or stayed by a court.
- c) Any CAFO required to submit information to the United States Environmental Protection Agency pursuant to a final action under Section 308 of the Clean Water Act must submit the same information to Illinois EPA. The submission must occur simultaneously with the submittal to the United States Environmental Protection Agency or within 90 days following the effective date of this Section, whichever is later.
- d) The submittal required under this Section should be sent to:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Attn. Permit Section
 P.O. Box 19276
 Springfield, Illinois 62794-9276. PC 3030 at 11-12.

Environmental Groups (PC 3031)

The Environmental Groups supported the Board’s first-notice proposal to require certain CAFOs to submit specified information to the Agency. PC 3031 at 7. The Groups agreed that this information should include “the items listed in the IEPA’s May 2011 draft rule, with the addition of information to be collected on waste containment and storage units.” *Id.* The Groups cited the federal regulation requiring states to “maintain a program capable of making comprehensive surveys of all facilities and activities subject to regulations and to identify persons who have failed to comply with permit application or other program requirements.” *Id.*, citing 40 C.F.R. § 123.26(b)(1). The Groups disputed the Agency’s position that its development of an inventory makes a reporting requirement unnecessary. PC 3031 at 7. The Groups argued that the Agency relies on sources that “are incomplete and incapable of providing information adequate to develop such an inventory.” *Id.*

Although the Environmental Groups expressed appreciation for simplified reporting, they “urge[d] the Board to require just two more items of information. . . .” PC 3031 at 7-8. The Board addresses those two items in the following subsections.

Land Application Acreage. The Environmental Groups noted that USEPA’s proposed rule included a requirement to report acreage available for land application when the owner or operator performs land application of manure, litter, and process wastewater. PC 3031 at 8, citing 76 Fed. Reg. 65437 (Oct. 21, 2011). The Groups stated that USEPA has supported this requirement by stating that

[a] CAFO’s available land application area is likely to affect the amount of manure that can be land applied for agronomic purposes and the potential amount of nutrients that could flow into surrounding water of the United States. Combining information about manure quantity and characteristics with land available for application would indicate where issues might exist regarding excess manure. PC 3031 at 8, citing 76 Fed. Reg. 65438 (Oct. 21, 2011).

The Groups claimed that, without this information, “it will be impossible for the Agency to determine whether unpermitted large CAFOs have enough acreage to qualify for the agricultural stormwater exemption through application at agronomic rates.” PC 3031 at 8.

The Environmental Groups stated that USEPA withdrew its proposed reporting rule with “the expectation that it would be able to obtain information from the states.” PC 3031 at 8, citing 77 Fed. Reg. 42679 (July 20, 2012). The Groups argued that, other than requiring it to be reported, there is no realistic way for the Agency to obtain information about land application acreage. PC 3031 at 8.

The Groups requested that the Board add the following element to the proposed Illinois reporting requirements: “total number of acres under the control of the owner or operator available for land application if the facility land applies manure, litter, or process wastewater.” PC 3031 at 9; *see* 40 C.F.R. § 122.23(k)(2)(v), 76 Fed. Reg. 65437 (Oct. 21, 2011).

Waste Management Plans. The Environmental Groups also urged the Board to require submission of waste management plans, where they exist. PC 3031 at 8. The Groups argued that having these plans will enable the Agency to set priorities for inspections and identify possible violations of the Act. *Id.*, citing 415 ILCS 5/12(a), (b) (2012). The Groups further argued that only permitted CAFOs are required to submit NMPs to the Agency. PC 3031 at 9. They added that, under the LMFA, “[o]nly new or expanding livestock management facilities housing over 5,000 animal units even have to submit their waste management plans to the Department of Agriculture for approval.” *Id.*, citing 510 ILCS 77/20(d), 8 Ill. Adm. Code 900.802(d).

The Environmental Groups claimed that this proposed requirement is not a burden on CAFOs because it requires submission only when a plan exists. PC 3031 at 9. They further argued that it would not be a burden on the Agency because it is not required to review or

approve the plans. *Id.* They suggested that the requirement would benefit the Agency by providing an inventory that “would help to expedite inspection and enforcement actions. . . .” *Id.*

The Environmental Groups requested that the Board add the following element to the proposed Illinois reporting requirements: “a complete copy of the facility’s waste management plan or nutrient management plan if the facility has such a plan.” PC 3031 at 10.

Integrators. In addition, the Environmental Groups argued that, because the Agency exercises little oversight over waste management plans, “there is no way to ensure individual contract facilities have adequate land available for manure disposal.” PC 3031 at 16. They claimed that, by requiring information submitted under proposed Section 501.505(c) to include integrator information, “the Agency will be better able to determine if densely concentrated livestock operations are affiliated with each other through common integrator management and, in the event an unpermitted discharge occurs, who the potentially responsible parties are for enforcement and permitting purposes.” *Id.*; *see id.* at 17.

Agricultural Coalition Response (PC 3040)

The Agricultural Coalition stated that the CAFO inventory created and maintained by the Agency “is sufficient without the information required in the Board’s First Notice Opinion and Order, or the additional information now sought by the Environmental Groups.” PC 3040 at 3. The Agricultural Coalition further stated that it “strongly opposes the imposition of mandatory requirements that serve no apparent regulatory purpose” and further contends “the two pieces of information now sought by the Environmental Groups are irrelevant to the formation of a CAFO inventory.” *Id.*

The Agricultural Coalition noted that all information submitted pursuant to a reporting and registration rule would be subject to public release through the Freedom of Information Act. PC 3040 at 4, citing 5 ILCS 140/3 (2012). The Agricultural Coalition contended that the information now sought by the Environmental Groups “has no relevance to the creation of a CAFO inventory” and only serves to “provide more information to those seeking to unreasonably interfere with legitimate farming operations.” *Id.*

The Agricultural Coalition stated that the Agency has not requested disclosure of waste management plans. PC 3040 at 4. Rather, the Agricultural Coalition contended that the Agency has stated that a registration and reporting rule “was not necessary for creation of the CAFO inventory.” *Id.*, citing Board Opinion at 183, 247. The Agricultural Coalition stated that waste management plan requirements are in place for facilities with over 5,000 animal units and for those with 1,000 to 5,000 animal units. *Id.*, citing 510 ILCS 77/20 (2012), 8 Ill. Adm. Code 900.802. Therefore, the Coalition claimed that submission of waste management plans to the Agency pursuant to a registration and reporting rule “is unnecessary and without sufficient administrative benefit to outweigh the burden to compliant farmers.” *Id.* at 4-5.

Board Discussion

The Board disagrees with the Agricultural Coalition that it does not have authority to require submission of information. PC 3030 at 5. The Board stated at first notice:

Section 5(b) of the Act provides the Board with rulemaking authority to “determine, define, and implement the environmental control standards applicable in the State of Illinois and may adopt rules and regulations in accordance with Title VII of this Act.” 415 ILCS 5/5(b) (2012); *see* 415 ILCS 5/26-29 (2012). Section 27(a), part of Title VII of the Act, provides that the “Board may adopt substantive regulations as described in this Act. . . . The generality of this grant of authority shall only be limited by the specifications of particular classes of regulations elsewhere in this Act.” 415 ILCS 5/27(a) (2012).

* * *

In addition to these statutory provisions cited by the Agency, the Board is also mindful that Section 11(b) of the Act provides that a purpose of the Act’s water pollution provisions is “to authorize, empower, and direct the Board to adopt such regulations and the Agency to adopt such procedures as will enable the State to secure federal approval to issue NPDES permits pursuant to the [CWA].” 415 ILCS 5/11(b) (2012). The Act further directs that these provisions “shall not be construed to limit, affect, impair, or diminish the authority, duties and responsibilities of the Board, Agency . . . to regulate and control pollution.” 415 ILCS 5/11(c) (2012).

* * *

Section 13(b) specifically enables the Board to adopt rules needed to implement the NPDES program and this authority is broader than what specifically is required by a federal mandate. Section 13(b) of the Act provides:

Notwithstanding other provisions of this Act and for purposes of implementing an NPDES program, the Board shall adopt: (1) Requirements, standards, and procedures which, together with other regulations adopted pursuant to this Section 13, are necessary or appropriate to enable the State of Illinois to implement and participate in the National Pollutant Discharge Elimination System (NPDES) pursuant to [the CWA]. All regulations adopted by the Board governing the NPDES program shall be consistent with the applicable provisions of such federal Act and regulations pursuant thereto, and otherwise shall be consistent with all other provisions of this Act . . .” 415 ILCS 5/13(b) (2012).

The Illinois Appellate Court has had opportunities to interpret this language in the context of challenges to NPDES rules adopted by the Board. That court has

explained “It is clear that section 13(b)(1) of the Illinois Act, which requires the Board to promulgate regulations ‘necessary or appropriate’ for Federal approval and regulations which are ‘consistent’ with the [CWA], does not limit the Board’s rule-making power to that necessary to obtain Federal approval of Illinois’ NPDES permit program.” U.S. Steel Corp. v. PCB, 52 Ill.App.3d 1, 4-5, 367 N.E. 2d 327 (2nd Dist. 1977), citing Peabody Coal Co. v. PCB, 36 Ill.App.3d 5, 15-16, 344 N.E.2d 279, 285 (5th Dist. 1976). The court continued, “Such a limited interpretation of the Illinois Act would unduly hinder the Board from achieving the true goal of the NPDES permit system, which is the limitation of the discharge of point source pollutants into navigable waters.” *Id.*; *see also Illinois Power Co. v. PCB*, 112 Ill. App. 3d 457, 461, 445 N.E.2d 820, 823 (5th Dist. 1983) (“Under this section all regulations adopted were to be consistent with federal law and otherwise consistent with the Illinois act”). Board Opinion at 181-183.

The Board proposed at first notice a requirement for unpermitted Large CAFOs to submit limited information necessary for Illinois to implement the NPDES program for CAFOs. *See* Board Opinion at 184. Federal NPDES regulations require Illinois to maintain “a program which is capable of making comprehensive surveys of all facilities and activities subject to the [Agency’s] authority to identify persons subject to regulation who have failed to comply with permit application or other program requirements.” 40 C.F.R. § 123.26(b)(1). The Board specifically agreed with the Agency’s position that the purpose of submitting this information is “to have a usable, workable, day-to-day updateable list that the Agency can rely on in putting together inspection prioritization.” Board Opinion at 184. The Board analyzed the record and noted data gaps in currently available information from the Agency, Illinois Department of Agriculture, and Illinois Department of Public Health needed for such a comprehensive survey. The Department of Agriculture’s data under the LMFA date only to 1996, and the Department of Public Health’s data cover only dairy operations. Board Opinion at 183, 184. The Board proposed Section 501.505 to collect basic information needed to comply with 40 C.F.R. § 123.26(b)(1). The public comments have not contested the Board’s analysis of 40 C.F.R. § 123.26(b)(1). Nor do the comments point to the record for any support that the Agency’s database approach is sufficient or that the Board overlooked any data in its analysis of data gaps.

The Board carefully tailored the required information to meet the requirements of 40 C.F.R. § 123.26(b)(1). The Board’s proposal closely follows the requirements of both the Agency’s own May 2011 draft rule and the withdrawn USEPA proposal. *See* 76 Fed. Reg. 65431 (Oct. 21, 2011). While the Agricultural Coalition has opposed this proposed section, the Board has concluded that the level of detail proposed by the Environmental Groups is not necessary. Board Opinion at 183. Further, the Agency has provided no comment on the Board’s proposed Section 501.505. The limited information required under proposed Section 501.505 is necessary and appropriate for Illinois to implement the NPDES program for CAFOs. The Board therefore does not find it necessary to include the additional items proposed by the Environmental Groups in order to meet the requirements of 40 C.F.R. § 123.26(b)(1). *See* PC 3031 at 7-10. Further, the Board addresses the request to collect information on integrators below in relation to Section 502.201(a).

Section 502.101: NPDES Permit and Duty to Maintain Permit Coverage

Board's First Notice Proposal

The Agency originally proposed to add a subsection (b) to Section 502.101 which provided in its entirety that

[t]he owner or operator of a CAFO must seek coverage under an NPDES permit if the CAFO discharges, provided that:

- (1) A past discharge from a CAFO does not trigger a duty to apply for a permit if the conditions that gave rise to the discharge have been corrected and the CAFO modified its design, construction, operation or maintenance in such a way as to prevent discharges from occurring in the future.
- (2) *No permit shall be required under this Part for any discharge for which a permit is not required under the CWA, and regulations pursuant thereto* (Section 12(f) of the Act).

The Agency stated that its proposed language would clarify permitting obligations in light of the Pork Producers case and reduce confusion about which facilities need to apply for a permit. *See* Board Opinion at 40. At first notice, the Board declined to propose subsection (b)(1), finding it more appropriate to provide an explanation of the current status of CAFO permitting obligations rather than codify it into the Board's regulations. *Id.* at 208. The Board also declined to adopt subsection (b)(2), finding it unnecessary to adopt such language to give effect to a provision of Section 12(f) of the Act. *Id.*

Agency (PC 3027)

The Agency noted that, although its original proposal included language intended "to clarify when a permit is necessary," the Board had struck that language from Section 502.101(b). PC 3027 at 7. The Agency claimed that this issue is "the most litigated provision of the federal CAFO rules." *Id.* The Agency reported that federal courts struck down two versions of those rules before USEPA modified them "to clarify that a permit is needed at the time the CAFO discharges." *Id.* at 8, citing Natl. Pork Producers Council, et al. v. USEPA, 635 F.3d 738 (5th Cir. (2011)); Waterkeeper Alliance v. U.S. Env'tl. Prot. Agency, 399 F.3d 486, 490 (2nd Cir. 2005); 77 Fed. Reg. 44494 (July 30, 2012).

The Agency argued, however, that it remains unresolved whether a CAFO that discharges once forever needs an NPDES permit. PC 3027 at 8. The Agency stated its belief that such a facility does not need to maintain permit coverage and argued that USEPA concurs. *Id.*, citing 73 Fed. Reg. 70423 (Nov. 20, 2008). The Agency claimed that the Board's rules must codify this position to "provide much needed clarity to the regulated community" and the Agency. PC 3027 at 8. The Agency stated that, until there is additional clarification of permitting requirements, it "will implement the rules as stated in the Agency's proposed Section

502.101(b)(1) and (2).” *Id.* at 9. The Agency argued that the subsections omitted by the Board “are necessary provisions” and that codifying them “will reduce conflict in the permitting process, prevent changing interpretations as time passes, and ensure the Board’s intent is clearly stated and carried out.” *Id.* at 8, 9.

The Agency proposed “a simplified version” of its originally proposed language in Section 502.101. PC 3027 at 9. The Agency proposed a new subsection providing in its entirety that

[a] CAFO that has had a past discharge is not required to seek coverage under an NPDES permit if the Agency determines that the conditions that gave rise to the discharge have been corrected and that the design, construction, operation or maintenance of the CAFO has been modified in such a way as to prevent discharges from occurring in the future. This subsection does not apply to repeated, sporadic or intermittent discharges. *Id.*

The Agency noted that its original proposal had not specified “who determines whether a past discharge has been corrected and future discharges prevented.” *Id.* The Agency argued that its proposed language clarified that the Agency would make this determination. *Id.* The Agency also emphasized its proposed “language clarifying that CAFOs with repeated, sporadic or intermittent discharges must obtain an NPDES permit.” *Id.*

As it had in its original proposal, the Agency sought to add a subsection providing in its entirety that “[n]o permit shall be required under this Part for any discharge for which a permit is not required under the CWA, and regulations pursuant thereto. (Section 12(f) of the Act).” PC 3027 at 9; *see* 415 ILCS 5/12(f) (2012), Board Opinion at 40.

Agricultural Coalition (PC 3030)

The Agricultural Coalition noted that the Board’s first-notice proposal had struck two subsections from the Agency’s proposed Section 502.101. PC 3030 at 21; *see* Board Opinion at 207-08. The Coalition argued that these subsections stated terms under which a facility is required to obtain a permit. PC 3030 at 21. Describing this as “one of the most basic elements of the proposed rule,” the Coalition argued that the rules should state these terms clearly so that facilities understand enforceable permitting obligations. *Id.* at 21-22.

The Agricultural Coalition stated that the Agency’s proposed subsection (b)(1) addressed past discharges. PC 3030 at 22; *see also* Board Opinion at 207. The Agricultural Coalition stated that USEPA has explained “that a past discharge from a CAFO does not trigger a duty to apply for a permit if the conditions that gave rise to the discharge have been corrected.” PC 3030 at 22, citing 73 Fed. Reg. 70423 (Nov. 20, 2008). The Coalition characterized this as “a direct federal expression of when a permit will be required under the CWA.” PC 3030 at 23. The Coalition argued that, because the Act provides that “NPDES permits are only required in Illinois if they are required federally,” the Agency’s proposed subsection (b)(1) is “necessary for proper implementation of the permit obligation.” *Id.* The Coalition further argued that, because the Board hears cases enforcing the Act, “it is important for the Board to recognize the

appropriate federal intention now, in the context of this rule, so that the regulated community has the certainty it needs.” *Id.* The Coalition added that the Agency, “as the administrator of the state’s NPDES permitting program, obviously believed this language to be an important addition to its rules.” *Id.* at 22.

The Agricultural Coalition suggested that the Board propose for second notice a Section 502.101(b)(1) providing in its entirety that “[a] past discharge from a CAFO does not trigger a duty to apply for a permit if the conditions that gave rise to the discharge have been corrected and the CAFO modified its design, construction, operation or maintenance in such a way as to prevent discharges from occurring in the future.” PC 3030 at 24.

The Agricultural Coalition stated that the Agency’s proposed subsection (b)(2) cited Section 12(f) of the Act. Board Opinion at 207; *see* 415 ILCS 5/12(f) (2012). The Agricultural Coalition argued that “the Board routinely codifies statutory language” and that there was no valid reason not to do so in this case. PC 3030 at 24. The Coalition further argued that the Agency had considered this language to be appropriate. *Id.* The Coalition also claimed that reinstating this language “will ensure that an NPDES permit is only required in accordance with federal law.” *Id.*

The Agricultural Coalition suggested that the Board propose for second notice a Section 502.101(b)(2) providing in its entirety that “[n]o permit shall be required under this Part for any discharge for which a permit is not required under the CWA, and regulations pursuant thereto. (Section 12(f) of the Act).” PC 3030 at 24.

Agency Response (PC 3042)

The Agency acknowledged that the Agricultural Coalition’s proposed Section 502.510(b) “is nearly identical to the language proposed by the Agency in its initial rulemaking proposal.” PC 3042 at 8. However, the Agency “strongly urges the Board to include the language the Agency proposed in its First Notice comments for the reasons stated therein.” *Id.* at 9, citing PC 3027 at 9.

Board Discussion

The Board is aware of the federal CAFO rules and USEPA’s discussion of them at 73 Fed. Reg. 70418 cited by both the Agency and the Agricultural Coalition. USEPA stated that it “agrees that not every past discharge from a CAFO necessarily triggers a duty to apply for a permit; however, a past discharge may indicate that the CAFO discharges or proposes to discharge if the conditions that gave rise to the discharge have not changed or been corrected.” 73 Fed. Reg. 70418, 70423. In light of this understanding, USEPA adopted 40 C.F.R. § 122.23(d)(1) and (f). Those sections state:

- (d) Who must seek coverage under an NPDES permit?
 - (1) Permit Requirement. The owner or operator of a CAFO must seek coverage under an NPDES permit if the CAFO discharges or proposes to

discharge. A CAFO proposes to discharge if it is designed, constructed, operated, or maintained such that a discharge will occur. Specifically, the CAFO owner or operator must either apply for an individual NPDES permit or submit a notice of intent for coverage under an NPDES general permit. If the Director has not made a general permit available to the CAFO, the CAFO owner or operator must submit an application for an individual permit to the Director.

* * *

- (f) When must the owner or operator of a CAFO seek coverage under an NPDES permit? Any CAFO that is required to seek permit coverage under paragraph (d)(1) of this section must seek coverage when the CAFO proposes to discharge, unless a later deadline is specified below.

The Board's proposal takes the same approach as USEPA in Section 502.101(a), (b), and (c). Accordingly the Board proposes at second notice the same language proposed at first notice.

The Agency stated that it remains unresolved whether a CAFO that discharges once forever needs an NPDES permit. PC 3027 at 8. The Agency stated that,

[u]ntil such time when the Board, the courts or USEPA further define the CAFO permit requirements, the Illinois EPA will implement the rules as stated in the Agency's proposed Section 502.101(b)(1) and (2). *Id.* at 9.

The Board appreciates the Agency's concern on this matter, but declines to include such language in the rule.

Section 502.106(d): Case-by-Case Designation Requiring NPDES Permit

Board's First-Notice Proposal

The Board proposed to amend existing subsection (d) as follows:

Upon receipt of the Agency's notification that an NPDES permit is required pursuant to this Section, paragraph b) the operator shall make application to the Agency within 90~~60~~ days. The Agency may issue an NPDES permit with a compliance schedule detailing interim steps to be taken along with a final date, not to exceed 14 months from the date the permit is issued, by which compliance with the Act and all applicable regulations shall be achieved. Board Opinion at 284.

The Board noted that this subsection is based on a federal requirement amended by USEPA in 2012. *Id.* at 255, citing 77 Fed. Reg. 44495, 44497 (July 30, 2012) (amending 40 C.F.R. § 122.23(f)). The Board sought comment on whether this amendment necessitated revision of subsection (d). Board Opinion at 256.

Agency (PC 3027)

The Agency stated that its original proposal reflected the 2008 federal regulation by providing designated CAFOs 90 days to apply for an NPDES permit after receiving notice of designation. PC 3027 at 6, citing 40 C.F.R. § 122.23(f)(5). The Agency noted that USEPA amended this regulation to provide that “[a] CAFO must be covered by a permit at the time that it discharges.” PC 3027 at 7. The Agency claimed that, “[o]nce the AFO [animal feeding operation] is designated as CAFO, any discharge from the designated CAFO is unauthorized until a permit is issued. Therefore, upon designation, the CAFO must stop discharging until it has obtained an NPDES permit.” *Id.*

The Agency argued that the 90-day application deadline should remain in the proposed rules “because newly designated CAFOs should apply for a permit as soon as possible.” PC 3027 at 7. The Agency noted that 40 C.F.R. § 122.21 provides that “the discharger must apply for a permit under § 122.21 within 60 days of notice, *unless permission for a later date is granted by the Regional Administrator.*” *Id.* (emphasis in original), citing 40 C.F.R. § 124.52(b). The Agency claimed that the 60-day federal deadline “is open to extension.” PC 3027 at 7. The Agency added that the Board should propose this deadline “with the understanding that the designated CAFO will not be authorized to discharge from the time of designation until a permit has been issued.” *Id.*

Agricultural Coalition

The Agricultural Coalition “strongly” supported the Agency’s proposal to maintain the 90-day application deadline. PC 3030 at 34; *see* PC 3027 at 6. The Coalition stated that the 90-day deadline allows operators to continue operations during the permit application process. PC 3030 at 34. The Coalition added that “immediate termination of operations through an application or appeal period would result in substantial hardship to operators who have contractual obligations to fulfill.” *Id.* at 35.

Board Discussion

The Board appreciates the Agency’s and the Agricultural Coalition’s response to the Board’s request for comment on the proposed language. As noted by the Agency, the 60-day federal deadline is “open to extension” in that a discharger must apply for a permit under 40 C.F.R. § 122.21 within 60 days of notice, “unless permission for a later date is granted by the Regional Administrator.” PC 3027 at 7, citing 40 C.F.R. § 124.52(b). The Board finds the currently proposed 90-day application period consistent with the federal language and makes no changes to that requirement from first notice; however, the Board does make other language and formatting changes as discussed in the following section.

Section 502.106(e): Case-by-Case Designation Requiring NPDES Permit

Board’s First-Notice Proposal

The Board proposed to replace existing subsection (e) with the following:

The Agency will notify the owner or operator in writing of the Agency's decision to designate the Animal Feeding Operation as a CAFO under this Section and the grounds for the designation. The owner or operator may file an appeal of the Agency's decision with the Board within 35 days after the date on which the Agency served the decision pursuant to Section 40(a) of the Act and 35 Ill. Adm. Code 105. Board Opinion at 284.

Agency (PC 3027)

The Agency objected to the Board's proposed Section 502.106(e) allowing operations designated as CAFOs to appeal that designation. PC 3027 at 2; *see* Board Opinion at 172-77, 284. The Agency characterized designation as a CAFO as a step in the permitting process and not as a final decision appealable under the Act. PC 3027 at 2, citing 415 ILCS 5/5(d), 40 (2012); 35 Ill. Adm. Code 101.106(d). The Agency argued it could review its designation of an operation as a CAFO and determine that the operation did not require a permit. PC 3027 at 2.

The Agency stated that the federal CAFO rules do not provide designated CAFOs with immediate appeal rights but allow appeals as part of an NPDES permit appeal. PC 3027 at 2-3, citing 40 C.F.R. § 124.52. The Agency elaborated that the federal rules provide that "the question of whether a designation is proper is open for consideration during the permitting process." PC 3027 at 3. The Agency stated that, "[w]hen the designation question remains open, the Agency will accept public comments on the designation question and may hold a public hearing on the matter consistent with Subtitle C of the Board's regulations." *Id.* The Agency argued that this procedure allows the designated CAFO to support its position that a permit should not be required, better informs the Agency during the decision-making, and establishes a more complete record on appeal. *Id.* The Agency elaborated that "a designated CAFO can appeal the permit on the basis that it should not be a designated CAFO." *Id.* at 6. The Agency suggested that it could enforce its designation if a designated CAFO does not apply for a permit. *Id.*

The Agency claimed that the record on immediate appeal of a CAFO designation "would be limited to the information before the Agency, most likely a field report, when it sent the notice of designation." PC 3027 at 4. The Agency further claimed that the designated operation "would be unable to present evidence to the Board that it has fixed the problems that resulted in the CAFO being a significant contributor to pollutants to water of the United States or that it has eliminated the discharge. . . ." *Id.* The Agency argued that the designation process should allow an operation to present evidence to the Agency before designation. *Id.* The Agency also favored keeping the designation issue open for consideration during the permitting process and eliminating appeal of the designation. *Id.*

Accordingly, the Agency proposed a new subsection providing in its entirety that,

[p]rior to designating an animal feeding operation as a CAFO, the Agency shall send the Animal Feeding Operation a written notice that it intends to designate the Animal Feeding Operation as a CAFO. The notice shall include grounds for the designation and information regarding the opportunity to request a meeting with

the Agency within 90 days of the Animal Feeding Operation's receipt of the notice to present evidence that it is not a significant contributor of pollutants to waters of the United States as provided in subsection (a) of this Section. Beginning 90 days after the initial written notice is received by the Animal Feeding Operation, the Agency may designate the Animal Feeding Operation as a CAFO. The Agency shall send the Animal Feeding Operation written notice of its designation decision and the grounds for the designation in writing. PC 3027 at 5.

The Agency also proposed to re-designate subsection (d) as subsection (e) and amend its first sentence as follows: “[u]pon receipt of the Agency’s designation decision~~notification that an NPDES permit is required pursuant to this Section, paragraph b)~~ the owner or operator shall make an NPDES permit application to the Agency within ~~90~~60 days.” PC 3027 at 6. Finally, the Agency proposed to strike the entire proposed subsection (e) and to add a subsection (f) providing in its entirety that “[t]he question of whether the designation was proper will remain open during the pendency of the permit application. Any appeal of the Agency’s designation decision must be made as part of an NPDES permit appeal.” *Id.*

Agricultural Coalition (PC 3030)

The Agricultural Coalition favored the process proposed by the Agency in its first-notice comments. PC 3030 at 17-18; *see* PC 3027 at 1-6. The Coalition stated that the Agency’s “language allows for a pre-designation exchange of information between the owner or operator of an AFO and the IEPA, as well as an additional period of 90 days by which the owner or operator, if ultimately designated as a CAFO, must prepare and file an NPDES permit application with IEPA; while retaining the right to contest that designation as part of a later permit appeal before the Board.” PC 3030 at 18; *see* PC 3027 at 4-6.

Environmental Groups (PC 3031)

The Environmental Groups recommended striking from the Board’s first-notice proposal language allowing a facility to appeal designation as a CAFO. PC 3031 at 4; *see* Board Opinion at 172-77, 284. The Groups argued that allowing these appeals “is contrary to Illinois law and would further disrupt the Agency’s ability to implement its NPDES program for CAFOs in accordance with the CWA and with Agency agreements with the USEPA.” PC 3031 at 4.

The Environmental Groups claimed that the Board has authority to review specified Agency determinations, but those determinations “must be ripe for review.” PC 3031 at 4, citing Alternate Fuels, Inc. v. Env’tl. Prot. Agency, 315 Ill. 2d 219 (2005). The Groups argued that determinations become ripe when they are final. PC 3031 at 4. The Groups claimed that requiring a final decision “prevent[s] the courts, through avoidance of premature adjudication, from entangling themselves in abstract disagreements over administrative policies, and also to protect the agencies from judicial interference until an administrative decision has been formalized and its effects felt in a concrete way by the challenging parties.” *Id.*, citing Abbott Labs. v. Gardner, 387 U.S. 136, 148-49 (1967). The Environmental Groups cited the Act to argue that the Board is limited to reviewing final Agency determinations. PC 3013 at 4, citing

415 ILCS 5/5(d) (2012). The Groups claimed that final action “terminates the matter before the Agency or affects the Petitioner’s legal rights, duties or privileges.” PC 3031 at 4, citing Transtechology Corp. v. Env’tl. Prot. Agency, PCB 91-39 (Apr. 25, 1991). The Groups further claimed that Agency action “is final for appeal purposes when review will not disrupt the orderly adjudication process and legal consequences will result from the agency’s action.” PC 3031 at 4, citing Ash v. Iroquois Co. Bd., PCB 87-183 (May 5, 1988).

The Environmental Groups disputed the Board’s position that the Agency’s designation of a facility as a CAFO under proposed Section 502.106 is a final determination. PC 3013 at 4. The Groups argued that designation precedes the application for and issuance of a permit. *Id.* They stressed the Agency’s and the Agricultural Coalition’s acknowledgement that “the permit application process itself may lead to a conclusion that a permit is not necessary.” *Id.* The Environmental Groups claimed that designation does not result in legal consequences. *Id.* The Groups argued that, “[w]hile the designation may ultimately lead to IEPA issuing a permit and/or taking an enforcement action, the designation itself does not secure the legal fate of the operation.” *Id.* at 5.

The Environmental Groups argued that allowing appeal of these designations “could seriously interfere with the state’s ability to bring discharging CAFOs under permits.” PC 3031 at 6. The Groups claimed that the Agency’s NPDES program for CAFOs fails to meet minimum thresholds under the CWA. *Id.*, citing Exh. 14 at 3. The Groups claimed that a number of factors “illustrate the problems the Agency already faces with NPDES permitting.” PC 3031 at 6, citing Exh. 14 at 13, 31, 33-35. As one example, they stated that “[t]he Agency has less than seven full-time employees responsible for reviewing permit applications, performing inspections, responding to complaints, and performing non-CAFO inspection duties.” PC 3031 at 6, citing Exh. 14 at 33-34. The Groups argued that allowing appeal of CAFO designations under Section 502.106 “would only encourage more litigation and further strain an over-taxed program.” PC 3031 at 6. They concluded that “[l]itigating preliminary determinations could cripple the Agency’s ability to protect Illinois waters from CAFO pollution.” *Id.*

Board Discussion

At first notice, the Board’s proposed Section 502.106(e) allowed a designated CAFO to appeal that determination to the Board within 35 days after the Agency served that decision on the Animal Feeding Operation. The Board appreciates the responses that it has received on this proposal. Generally, the commenters propose a process through which an operation can challenge the Agency’s intent to designate it as a CAFO and allowing a designated CAFO to appeal that designation determination as part of a greater permit appeal. This position is consistent with 40 C.F.R. § 124.52, which the Agency states does not provide designated CAFOs with immediate appeal rights. PC 3027 at 2-3. The Board concludes that CAFO designation is a step in the permitting process and therefore not a final determination appealable to the Board, but rather may be contested as part of a final determination permit appeal. At second notice, the Board incorporates the changes proposed by the Agency, as reflected in the Board’s order below.

Section 502.201(a): Permit Application

Board's First-Notice Proposal

The Board proposed in Section 502.201(a) to require that “[a]ll applications from a new or existing CAFO for any permit, including an individual permit or a general permit, required under this Chapter shall contain, where appropriate,” fourteen specified items of information. Board Opinion at 284-86. The Board sought comment on the Environmental Groups’ proposed subsection (a)(2) regarding contract operations and requested that the Groups suggest revised language if they wished the Board to consider a requirement that the permit application include that information. *Id.* at 256.

Agricultural Coalition (PC 3030)

The Coalition opposed any application requirements beyond those the Agency proposed. PC 3030 at 36. The Coalition argued that the owner or operator bears responsibility for management of a facility, making any contractual relationships irrelevant and inappropriate for public disclosure. *Id.* The Coalition stated that production practices at a facility, “whether part of a contractual relationship or not, must continue to comply with the proposed rules and the conditions of a permit.” *Id.* The Coalition further stated that “[a] contractual relationship among an integrator and a farmer does not eliminate the responsibility to comply with the regulations.” *Id.*

The Agricultural Coalition added that contractual relationships “may change during the life of a facility or the term of a permit.” PC 3030 at 36. The Coalition argued that, if the permit application must include information on an integrator, then changes in the contractual relationship may require a permit amendment burdensome to both the facility and the Agency. *Id.* In addition, the Coalition stated that the Agency had not sought this information in its original proposal and the Board should conclude that the Agency does not believe this information is necessary to administer the CAFO program. *Id.* at 35.

Environmental Groups (PC 3031)

The Environmental Groups stated that integration of commercial business generally involves a single firm “engaged in different aspects of the production cycle of goods, including growing raw materials, manufacturing, transporting, marketing, and/or retailing.” PC 3031 at 14-15. The Groups further stated that integration of the livestock industry often is accomplished “through production contracts under which growers raise animals that are owned by integrators.” *Id.* at 15. They added that “terms of these contracts often detail conditions on how to raise the animals; how to construct housing facilities; how to feed and medicate the animals, and how to handle manure and dispose of carcasses. . . . As of 2008, 90% of poultry, 69% of hogs, and 29% of cattle were contractually produced through vertical integration.” *Id.*, citing Paul Stokstad, *Enforcing Environmental Law in an Unequal Market: The Case of Concentrated Animal Feeding Operations*, 15 MO. ENVTL. L. & POL’Y. REV. 229, 234-35 (2008).

The Environmental Groups noted “evidence that CAFOs become concentrated in close proximity to integrated meat packers and processing companies in order to gain efficiency and reduce the cost of travel, etc.” PC 3031 at 15. The Groups claimed that this concentration “increases the probability of excess manure nutrients being concentrated in particular geographic regions exceeding crop needs for fertilizer in those areas and raising the potential for water pollution.” *Id.*, citing 66 Fed. Reg. 3024 (Jan. 12, 2001). The Groups argued that the Agency “should collect information about integrators in permit applications so it can evaluate if there is a common integrator in the applicant’s particular geographic region, such that there is a potential for those CAFOs contracting with the common integrator to collectively exceed crop nutrient needs in the area based on the waste they produce.” PC 3031 at 15.

The Environmental Groups claimed that CAFO NPDES permit applicants are not providing integrator information. PC 3031 at 16. The Groups explained that “USEPA requires CAFO owners/operators to submit integrator information with general permit application materials in Notice of Intent (NOI) Appendix Form 2B.” *Id.*, citing 40 C.F.R. §§ 122.21, 122.28, 123.25; 73 Fed. Reg. 70475 (Nov. 20, 2008). The Groups added that the Agency “also currently requires submittal of the USEPA 2B Form for CAFOs seeking general permit coverage.” PC 3031 at 16, citing <http://www.epa.state.il.us/water/permits/cafo/general-npdes-permit.pdf> (General NPDES Permit for Concentrated Animal Feeding Operations, NPDES Permit No. ILA01, Special Condition 1, accessed Jan. 14, 2014). The Groups stated that the Agency’s Form 2B “requires applicants to indicate if they are contract operations and, if so, who the integrator is.” PC 3031 at 16, citing <http://www.epa.state.il.us/water/cafo/forms/3510-2b.pdf> (facility information in Section 1A of Form 2B). The Groups reported that, “of 41 CAFO NPDES permits submitted to the IEPA from 2009-2013, only one of the applicants that submitted a 2B Form provided integrator information.” *Id.* (citation omitted). Claiming that “it is unlikely that 98% of Illinois’ permitted CAFOs are unaffiliated with an integrator,” the Groups argued that “there is a need to specifically require submittal of this information under Section 502.201(a)(2). . . .” *Id.*

The Environmental Groups claimed that the Board’s first-notice proposal is not likely to elicit information about integrators. PC 3031 at 16. The Groups argued that the proposed definition of “owner/operator” does not clearly include integrators. *Id.* The Groups acknowledged that the definition does include persons controlling or supervising livestock operations, but they claimed that “the definition does not fully define other circumstances in which an integrator may qualify as an owner/operator for CWA permitting purposes.” *Id.* The Environmental Groups argued that the Board should propose to require that contract operators “provide integrator information in addition to general owner/operator information with permit applications. . . .” *Id.*

Agricultural Coalition Response (PC 3040)

The Agricultural Coalition contended that the Environmental Groups’ first notice comment “fails to provide an adequate rationale for permit applications to require” information related to “contractual relationships between owners or operators or others who might have investment or other business interests in the CAFO operation.” PC 3040 at 6. The Agricultural Coalition argued that the Environmental Groups “make several assumptions and logical leaps to create a connection between the location of CAFOs near integrators and increased potential for

water pollution.” *Id.* at 7. The Coalition claimed that the Groups relied on “[u]nnamed and uncited citizen reports . . . provided as evidence to assert that sharing of land application areas is occurring between contract operations.” *Id.* The Agricultural Coalition further argued that “there is no record evidence that there has ever been a problem arising due to the relationship between an integrator and multiple CAFOs.” *Id.* Further, the Coalition claimed that, while one custom manure hauler may apply manure for multiple farms, “each farm is required to develop its own manure management plan for livestock located at the particular farm, with the necessary landmass available to utilize nutrients.” *Id.* (emphasis in original).

Board Discussion

For first notice, the Board proposed that an application for an individual or general CAFO permit must include, as appropriate, fourteen specified items. Board Opinion at 284-86. The Board’s opinion specifically requested comment on the Environmental Groups’ proposal to add to these items of information regarding contract operators and the name and address of any integrator. *Id.* at 138, 190, 256. As noted above, the Groups argued that integration has become common in the livestock industry and may increase the risk that land application of livestock waste causes water pollution. The Groups further claimed that permit applications should be required to include information about contract operators and integrators in order for the Agency to be able to assess this risk.

The Board’s proposed Section 502.201(a) requires that permit applicants submit significant information regarding land application of livestock waste. Under subsection (7), the applicant must, as appropriate, provide a topographic map showing features including the specific location of land application areas. Subsection (9) requires the applicant to list “[t]he total number of acres of land application area and the estimated amount of waste to be applied to those acres per year.” Under subsection (10), the applicant must report the estimated amount of livestock waste annually transferred to other persons, and subsection (11) requires submission of an NMP complying with the detailed requirements for those plans. The Board believes that these and the other required elements of a permit application provide the Agency with information to determine whether an application lists sufficient acreage for land application and to assess the risks of water pollution stressed by the Environmental Groups. The Board notes that the Agency had not sought to require the submission of information about contract operations or integrators in its proposal.

The Board appreciates the Environmental Groups’ detailed response to its request for comment on this issue. However, the Board is not persuaded that the information the Groups have proposed to include in a permit application is necessary for the purposes of this regulation. Accordingly, the Board declines to amend Section 502.201 as proposed by the Environmental Groups. Having so decided, the Board also declines to amend Part 501 by adding the Groups’ proposed definition of “contract operation” at Section 501.239 and “integrator” at Section 501.264. *See* PC 3031 at 17.

Section 502.310(c): CAFOs Seeking Coverage Under NPDES General Permit

Board's First-Notice Proposal

The Board proposed Section 502.310(c) providing in its entirety that “[t]he Agency must notify the public of its proposal to grant coverage under the general permit to the CAFO. This public notice must include the CAFO’s nutrient management plan.” Board Opinion at 288.

LWVI (PC 3028)

Noting the requirements of proposed subsection (c), LWVI asked “[w]here will this notice be published, in what time frame, and will public comments be accepted?” PC 3028 at 1.

Board Discussion

Addressing proposed Section 502.310(c) in its first-notice opinion, the Board cited the Agency’s TSD, which states that, “[t]o satisfy the mandates of the federal rule, the Agency will publish the complete [general permit] application and NMP, which includes the terms of the NMP, on its website.” TSD at 7, citing 40 C.F.R. § 122.23(h); *see* Board Opinion at 49. The Agency clarified that, “[u]pon determination that the CAFO permit application and NMP can be covered by the general NPDES permit the Agency will publish the NMP on the Agency’s website.” Board Opinion at 50 (citing Agency testimony by Mr. Dan Heacock). The TSD states the Agency’s belief that “providing the complete NMP, rather than separating and publishing only limited terms of the NMP, is a complete way of providing public notice. . . . It also simplifies the process of accessing necessary information for the public yet accomplishes the same objectives intended by the federal rule, which is to provide the public the opportunity to comment on the adequacy of the NMP and on the nutrient management terms of the draft permit developed for a specific CAFO facility.” TSD at 8; *see* Board Opinion at 49.

The Board’s first-notice opinion also addressed public comments on Agency proposals to grant coverage under a general permit. Proposed Section 502.310(e) establishes a comment period of 30 days following the notice provided by subsection (c). Board Opinion at 50; *see* TSD at 8. The Board’s opinion noted the Agency’s belief that “30 days is appropriate in this case, as review of complex and detailed NMPs can be time consuming.” TSD at 8. The Agency indicated that this approach is consistent with NPDES regulations. *Id.*; *see* 35 Ill. Adm. Code 309.109(b) (Public Notice).

The Board appreciates LWVI’s participation in this rulemaking proceeding and trusts that this discussion responds to its questions regarding general permits.

Section 502.500: Purpose, Scope and Applicability

Board's First-Notice Proposal

The Board proposed introductory language providing in its entirety that “[t]he requirements in this Subpart are intended to minimize the transport of nitrogen and phosphorus

to waters of the United States in compliance with the nutrient management plan.” Board Opinion at 293.

Agency (PC 3027)

The Agency noted that, as published in the *Illinois Register*, the phrase “developed by the CAFO owner or operator” appeared after “nutrient management plan.” PC 3027 at 21; *see* 37 Ill Reg. 19032 (Dec. 2, 2013). The Agency stated that the Board had not required preparation by the owner or operator and added that an NMP “could be developed by an engineer or certified nutrient management planner.” PC 3027 at 21. The Agency also cited proposed Sections 502.325(b)(6) and 502.505(d) to note that the NMP and annual report for permitted CAFOs must specify who developed the plan. *Id.* The Agency recommended that the phrase “developed by the CAFO owner or operator” should be struck from this Section. *Id.*

Board Discussion

The Board first notes that the introductory language to Section 502.500 published in the *Illinois Register* included additional language that the Board’s opinion and order had not proposed. The Board recognizes the Agency’s claim that “compliance with the nutrient management plan developed by the CAFO owner or operator” may not include plans prepared by others. As the Agency points out, the Board’s proposal contemplates that a certified nutrient management planner or other person may develop or approve an NMP for an owner or operator. The Board is not as troubled as the Agency by the addition of this phrase, as it may include persons such as certified planners who act on behalf of an owner or operator. Nonetheless, the Board believes that addition of this phrase is unnecessary. It has plainly generated uncertainty. Accordingly, the Board will delete the phrase in its order below.

Section 502.500(a): Purpose, Scope and Applicability

Board’s First-Notice Opinion and Order

The Board proposed this subsection providing in its entirety that “[t]he requirements in this Subpart apply to CAFOs required to obtain an NPDES permit. Unpermitted Large CAFOs claiming an agricultural stormwater exemption must comply with Sections 502.102 and 502.510(b).” Board Opinion at 293.

Agricultural Coalition (PC 3030)

For the reasons detailed above on the discussion of Section 501.405(a), the Agricultural Coalition proposed to amend subsection (a) as follows: “[t]he requirements in this Subpart apply to CAFOs required to obtain an NPDES permit. Unpermitted Large CAFOs claiming an agricultural stormwater exemption for field application must comply with keep records consistent with Sections 502.102 and 502.510(b).” PC 3030 at 17.

Environmental Groups' Response (PC 3041)

As described above under Section 501.405(a), the Environmental Groups requested that the Board retain the language proposed at first notice in Sections 501.405, 502.500, and 502.600. PC 3041 at 2.

Agency Response (PC 3042)

The Agency requested that the Board reject the Agricultural Coalition's proposal because adopting it would make the rules less stringent than the federal rule. PC 3042 at 1. The Agency instead proposed the following changes to the Board's first notice proposal:

- a) The requirements in this Subpart apply to CAFOs required to obtain an NPDES permit. Unpermitted Large CAFOs claiming an agricultural stormwater-exemption pursuant to Section 502.102 are not required to have a nutrient management plan, but must comply with the requirements listed in Section 502.510(b). ~~must comply with Sections 502.102 and 502.510(b).~~ PC 3042 at 2.

Board Discussion

Proposed Sections 501.405(a) and 502.500(a) include an identical sentence regarding compliance with the agricultural stormwater exemption. Addressing proposed Section 501.405(a) above, the Board declined to adopt the Agricultural Coalition's proposed revision to Section 501.405 regarding compliance with the exemption. The Board noted the Agency's view that the suggested revision would make the proposal less stringent than the federal regulations. The Board also declined to revise the scope of the exemption, indicating that it was based on unsettled case law. The Board also noted that practices listed in Section 502.510(b) do not exclusively address land application. Accordingly, the Board also declines to adopt those revisions in this section.

As it did in reviewing Section 501.405(a), however, the Board recognizes that the final sentence of proposed Section 502.500(a) may benefit from clarification. For second notice, the Board proposes to provide in that sentence that "unpermitted Large CAFOs claiming an agricultural stormwater exemption pursuant to Section 502.102 are not required to have a nutrient management plan but must comply with the requirements listed in Section 502.510(b) to qualify for the exemption." The order below reflects this revision.

Section 502.510: Nutrient Management Plan Requirements

USDA – NRCS (PC 30)

NRCS suggested "that the Board consider the use of the current NRCS 590 Nutrient Management Standard" in the development of NMPs. PC 30 at 1. NRCS also suggested that the Board refer to the standard in this section. *Id.*

Agency (PC 3027)

The Agency noted NRCS's suggestion that the Board consider adding to this section a reference to the current NRCS 590 Nutrient Management Standard regarding development of NMPs. PC 3027 at 22; *see* PC 30 at 1. However, the Agency claimed that NRCS had not indicated how the standard differed from the Board's proposal or how to incorporate the standard into the proposal. PC 3027 at 22. The Agency acknowledged that the Board's proposal and the NRCS standard may both apply to a facility's land application area. *Id.* at 23. The Agency argued that, "if there are inconsistencies between the Board's proposed rule and the 590 standard," then NRCS can amend the standard as necessary. *Id.* The Agency stated that it did not see a basis to make this suggested revision and recommended that the Board decline to adopt NRCS's proposed change to this subsection. *Id.*

Board Discussion

As the Board noted above in declining to incorporate the current NRCS 590 Nutrient Management Standard by reference, NRCS has not clearly indicated how the standard would be helpful for developing an NMP or how the Board should incorporate it into the proposed NMP requirements in this section. NRCS also has not explained how this standard may differ from the Board's proposed land application requirements or from the materials the Board proposed to incorporate by reference. Accordingly, the Board declines to add a reference to this standard to the requirements in this section.

Section 502.510(b)(2): Nutrient Management Plan Requirements**Board's First-Notice Proposal**

The Board proposed Section 502.510(b)(2) providing in its entirety that

- b) [t]he nutrient management plan must specify and demonstrate:
- * * *
- 2) [a]dequate land application area for livestock waste application which may include (i) land owned by the CAFO owner or operator, (ii) land leased by the CAFO, (iii) land covered by a consent agreement between the CAFO owner or operator and the property owner, or (iv) any combination of the above. Board Opinion at 295.

Agency (PC 3027)

The Agency noted that the Board's opinion refers in Section 502.510(b)(2)(ii) to examples of adequate land application areas including "land rented by the CAFO." PC 3027 at 19, citing Board Opinion at 190. The Agency also noted that the Board's order proposes in the same subsection to refer to "land leased by the CAFO." PC 3027 at 20, citing Board Opinion at 295. The Agency expressed the belief that the "the Board should be consistent in Section 502.510(b)(2)(ii). PC 3027 at 20. Noting that the proposed definition of "land application area"

in Section 501.267 includes both land rented or leased (*see* Board Opinion at 265), the Agency proposed that this subsection should include “land rented or leased by the CAFO.” PC 3027 at 20.

Board Discussion

The Board agrees with the Agency that proposed Section 502.510(b)(2)(ii) addressing adequate land application area should be consistent with the Board’s proposed definition of “land application area.” Accordingly, in its order below, the Board amends Section 502.510(b)(2)(ii) as suggested by the Agency to refer to “land rented or leased by the CAFO.”

Section 502.510(b)(13): Nutrient Management Plan Requirements

Board’s First-Notice Proposal

The Board proposed Section 502.510(b)(13) providing in its entirety that

- b) [t]he nutrient management plan must specify and demonstrate:
- * * *
- 13) The plan for the inspection, monitoring, management and repair of subsurface drainage systems at the livestock waste application site. Inspection of subsurface drainage systems shall include visual inspection prior to land application to determine failures that may cause discharges and visual inspection during and after land application to identify discharges. Board Opinion at 295-96.

Agricultural Coalition (PC 3030)

The Agricultural Coalition claimed that “[m]anure applications that are conducted at appropriate rates in appropriate soil conditions are not likely to encroach on saturated soil near tile depths.” PC 3030 at 25, citing PC 3030, Attachment D at 1 (¶5). The Agricultural Coalition acknowledged that “[v]isual inspection of tile inlets and outlets is reasonable in many cases.” *Id.* The Coalition argued that visual inspection beyond inlets and outlets may be impossible or inconclusive. *Id.*

The Agricultural Coalition stated that tiles installed in a field many years ago may not appear on maps or other records. PC 3030 at 25, citing PC 3030, Attachment D at 1 (¶6). The Agricultural Coalition further stated that subsurface drainage systems may lack exposed tile inlets. PC 3030 at 25, citing PC 3030, Attachment D at 1-2 (¶6). The Agricultural Coalition argued that these factors may make it “virtually impossible for a person to comply with the requirement as proposed by the Board.” PC 3030 at 25, citing PC 3030, Attachment D at 2 (¶6).

The Agricultural Coalition proposed to amend this subsection as follows:

[t]he plan for the inspection, monitoring, management and repair of subsurface drainage systems at the livestock waste application site. When allowed by land

surface cover or otherwise practicable, inspection of subsurface drainage systems shall include visual inspection of tile inlets and outlets prior to land application to determine failures that may cause discharges and visual inspection of tile inlets and outlets during and after land application to identify discharges. Inspection of subsurface drainage systems shall include visual inspection at least annually if the field is documented to contain such a system.

Agency Response (PC 3042)

The Agency disagreed with the Agricultural Coalition’s proposed final sentence of subsection (b)(13), claiming that “the inspections must be done every time livestock waste is applied to the field, not once a year.” PC 3042 at 9. The Agency also disagreed with the addition of “[w]hen allowed by land surface cover or otherwise practicable” to qualify when the visual inspections must be done. *Id.*

Board Discussion

The Board disagrees with the Agricultural Coalition’s contention that visual inspection of subsurface drainage system may be impossible due to standing crop, crop residue, or lack of documentation. The Board notes that proposed Section 502.505(g) requires the nutrient management plan to include photos or maps of each intended land application field indicating features including subsurface drainage systems. This provision is intended to require the owner or operator to identify and locate subsurface drainage systems on assessed fields. The Board expects that an owner or operator would rely upon the information gathered under Section 501.505(g) to comply with the proposed inspection requirements under Section 502.510(b)(13). Further, the Board’s first-notice opinion and order explained the importance of visual inspection of subsurface drainage systems prior to, during, and after livestock waste application. Board Opinion at 217-218. Accordingly, the Board declines to make the changes suggested by the Agricultural Coalition.

Section 502.515(d)(3), (e)(3)(B): Terms of Nutrient Management Plan

Board’s First-Notice Proposal

The Board proposed the following phrase in Section 502.515(d)(3) and Section 502.515(e)(3)(B): “the results of the most recent representative livestock waste tests for nitrogen and phosphorus taken within 12 months of the date of land application.” Board Opinion at 298-301 (emphasis added).

Agency (PC 3027)

The Agency noted that subsections (d)(3) and (e)(3)(B) were changed in the *Illinois Register* to require the calculations of the maximum amount of livestock waste to be applied must be done with tests taken within 12 months after the date of land application. PC 3027 at 22 (emphasis in original); *see* 37 Ill. Reg. 19038, 19041 (Dec. 2, 2013). The Agency argued that

this subsection should use the language in the Board’s first-notice opinion and order because “[l]ivestock waste cannot be tested after land application.” *Id.*

Board Discussion

The Board first notes that the first-notice opinion and order referred in Sections 502.515(d)(3) and 502.515(e)(3)(B) to “the results of the most recent representative livestock waste tests for nitrogen and phosphorus taken within 12 months of the date of land application.” Board Opinion at 298, 301. However, as published in the *Illinois Register* those two subsections referred instead to tests taken 12 months after the date of land application. 37 Ill. Reg. 19038, 19041 (Nov. 2, 2013). The Board agrees with the Agency that these sections should refer to testing within 12 months of application, as livestock waste cannot be tested after land application. Accordingly, in its order below, the Board will restore the language that the Agency had originally proposed and that the Board had included in its first-notice opinion and order.

Section 502.600: Applicability

Board’s First-Notice Proposal

The Board proposed this section providing in its entirety that

This Subpart provides livestock waste discharge limitations and technical standards for permitted CAFOs. Permitted CAFOs must achieve the livestock waste discharge limitations and technical standards in this Subpart as of the date of permit coverage. Unpermitted Large CAFOs claiming an agricultural stormwater exemption must comply with Sections 502.102 and 502.510(b) and are subject to portions of this Subpart to the extent required by Section 502.510(b). This Subpart does not apply to CAFOs that stable or confine Horses, Sheep or Ducks. CAFOs that stable or confine Horses or Sheep are subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.720. CAFOs that confine Ducks in either a Dry Lot or Wet Lot are subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.730. Board Opinion at 303.

Agricultural Coalition (PC 3030)

For the reasons noted above in the discussion of Section 501.405(a), the Agricultural Coalition proposed changes to Section 502.600 and separation into two subsections. The Agricultural Coalition first sought to designate the Board’s proposed Section 502.600 as subsection (a) and strike from it the sentence stating that “[u]npermitted Large CAFOs claiming an agricultural stormwater exemption must comply with Sections 502.102 and 502.501(b) and are subject to portions of this Subpart to the extent required by Section 502.510(b).” PC 3030 at 17.

The Agricultural Coalition also proposed to add a new subsection (b) providing in its entirety that

[u]npermitted Large CAFOs claiming an agricultural stormwater exemption for field application must keep records consistent with Sections 502.102 and 502.510(b) and are subjects to portions of this Subpart to the extent required by Section 502.510(b). CAFOs claiming an agricultural stormwater exemption for areas that are not production areas or land application areas may do so without keeping records meeting the intent of Sections 502.102 or 502.510(b). PC 3030 at 17.

Environmental Groups' Response (PC 3041)

For the reasons identified in the discussion of Section 501.405(a), the Environmental Groups requested that the Board retain the language proposed at first notice in Section 502.600. *Id.*

Agency Response (PC 3042)

For the reasons discussed above relating to Section 501.405(a), the Agency requested that the Board declines to accept the Agricultural Coalition's proposed language, but the Agency proposed the following changes to the Board's first notice language:

Section 502.600 Applicability

This Subpart provides livestock waste discharge limitations and technical standards for permitted CAFOs. Permitted CAFOs must achieve the livestock waste discharge limitations and technical standards in this Subpart as of the date of permit coverage. Unpermitted Large CAFOs claiming an agricultural stormwater exemption, while not required to have a nutrient management plan, may be subject to portions of this Subpart as specified in Section 502.510(b)~~exemption must comply with Sections 502.102 and 502.510(b) and are subject to portions of this Subpart to the extent required by Section 502.510(b).~~ This Subpart does not apply to CAFOs that stable or confine Horses, Sheep or Ducks. CAFOs that stable or confine Horses or Sheep are subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.720. CAFOs that confine Ducks in either a Dry Lot or Wet Lot are subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.730. PC 3042 at 2-3.

Board Discussion

Proposed Sections 501.405(a), 502.500(a), and 502.600 include similar language regarding compliance with the agricultural stormwater exemption. Addressing proposed Sections 501.405 and 502.500(a) above, the Board declined to adopt the Agricultural Coalition's proposed revision. The Board noted the Agency's view that the revision would make the proposal less stringent than the federal regulations. The Board also declined to adopt the revision relating to the scope of the exemption, indicating that it was based on unsettled case law.

In addition, the Board noted that practices listed in Section 502.510(b) do not exclusively address land application. Accordingly, the Board also declines to adopt those revisions in this section.

As it did in reviewing Section 501.405(a) and 502.500(a), however, the Board recognizes that language in Section 502.600 regarding compliance with the agricultural stormwater exemption may benefit from clarification. The Board also agrees with the Agricultural Coalition's suggestion that the section may be clarified by separation into subsections. For second notice, the Board proposes to amend Section 502.600 to provide in a new subsection (b) that "unpermitted Large CAFOs claiming an agricultural stormwater exemption pursuant to Section 502.102 are not required to have a nutrient management plan but must comply with the requirements listed in Section 502.510(b) to qualify for the exemption." The order below reflects these revisions.

Section 502.615(a): Field Assessment

USDA – NRCS (PC 30)

NRCS proposed that the Board adopt the Illinois Phosphorus Index and Illinois Nitrogen Management Guidelines in the December 2013 update to the Illinois NRCS 590 standard. PC 30 at 2. NRCS added that these tools are available in the Illinois NRCS Field Office Technical Guide, which is available online. *Id.* (providing address of guide).

Agency (PC 3027)

The Agency noted NRCS's suggestion that the Board consider referring to the current NRCS 590 Nutrient Management Standard regarding development of NMPs. PC 3027 at 22; *see* PC 30 at 1. However, the Agency claimed that NRCS had not indicated how the standard differed from the Board's proposal or how to incorporate the standard into the proposal. PC 3027 at 22. The Agency acknowledged that the Board's proposal and the NRCS standard may both apply to a facility's land application area. *Id.* at 23. The Agency argued that, "if there are inconsistencies between the Board's proposed rule and the 590 standard," then NRCS can amend the standard as necessary. *Id.* The Agency stated that it did not see a basis to make this suggested revision and recommended that the Board decline to adopt NRCS's proposed change to this subsection. *Id.*

Board Discussion

As the Board noted above in declining to incorporate the current NRCS 590 Nutrient Management Standard by reference, NRCS has not clearly indicated how that standard would improve implementation of the rules. NRCS also has not indicated whether the Board should incorporate either elements of or the entire standard into its proposal. In addition, NRCS also has not explained how this standard may differ from the Board's proposed land application requirements or from the materials the Board proposed to incorporate by reference. Finally, NRCS's comment does not specifically address its proposed adoption of the Illinois Phosphorus Index and did not include a copy of either document. Accordingly, the Board declines to add

these documents either to this section or to materials incorporated by reference in Section 501.200.

Section 502.615(a)(10): Nutrient Transport Potential.

Board's First-Notice Proposal

The Board proposed Section 502.615(a)(10) providing that

- a) Field assessment. An individual field assessment of the potential for nitrogen and phosphorus transport from the field to surface waters must be conducted and the results contained in the nutrient management plan. The following factors must be identified for each field to determine nitrogen and phosphorus transport potential to waters of the United States.

* * *

- 10) Subsurface drainage tiles. Board Opinion at 307-08.

Agricultural Coalition (PC 3030)

The Agricultural Coalition claimed that “[m]anure applications that are conducted at appropriate rates in appropriate soil conditions are not likely to encroach on saturated soil near tile depths.” PC 3030 at 25, citing *id.*, Attachment D at 1 (¶5). The Coalition acknowledged that “[v]isual inspection of tile inlets and outlets is reasonable in many cases. . . .” *Id.* The Coalition argued that visual inspection beyond inlets and outlets may be impossible or inconclusive. *Id.*

The Agricultural Coalition stated that tiles installed in a field many years ago may not appear on maps or other records. PC 3030 at 25, citing *id.*, Attachment D at 1 (¶6). The Coalition further stated that subsurface drainage systems may lack exposed tile inlets. PC 3030 at 25, citing *id.*, Attachment D at 1-2 (¶6). The Coalition argued that these factors may make it “virtually impossible for a person to comply with the requirement as proposed by the Board.” PC 3030 at 25, citing *id.*, Attachment D at 2 (¶6).

The Agricultural Coalition proposed to amend subsection (a)(10) as follows:

- 10) Subsurface drainage tiles, where evidence of location is available. PC 3030 at 26.

Board Discussion

The Board disagrees with the Agricultural Coalition’s contention that visual inspection of subsurface drainage systems may be impossible due to lack of documentation. The Board notes that proposed Section 502.505(g) requires the nutrient management plan to include photos or maps of each intended land application field indicating features including subsurface drainage systems. This provision is intended to require the owner or operator to identify and locate subsurface drainage systems on assessed fields. The Board expects that an owner or operator would rely upon the information gathered under Section 501.505(g) to comply with the proposed requirements under Section 502.615(a)(10). Further, the Board’s first-notice opinion explained

the importance of visual inspection of subsurface drainage systems prior to, during, and after livestock waste application. Board Opinion at 217-218. Accordingly, the Board declines to make the changes suggested by the Agricultural Coalition.

Section 502.615(c)(6): Nitrogen-Based Application

Board's First-Notice Proposal

The Board proposed Section 502.615(c)(6) providing that

- c) Nitrogen-based application of livestock waste must be conducted consistent with the following requirements:
 - * * *
 - 6) where surface waters are on the assessed field or within 200 feet of the field, the livestock waste applied to the field shall be injected or incorporated within 24 hours of the application or equivalent conservation practices must be installed and maintained on the field pursuant to the United States Department of Agriculture Natural Resources Conservation Service practice standards. Board Opinion at 308-09.

USDA – NRCS (PC 30)

NRCS stated that this measure intends “to ensure that within 200 feet of surface water, livestock waste applied must be injected or incorporated within 24 hours.” PC 30 at 2. NRCS claimed that field sizes vary “and runoff from a single field can flow in more than one direction, if a watershed divide exists in the field.” *Id.* NRCS argued that the proposed rule would require injection or incorporation over the entire field “even though most of the field is farther than 200 feet from surface water, and regardless of the direction in which runoff flows from the field.” *Id.* NRCS proposed to amend this subsection to require injection or incorporation on “portions of the field that are within 200 feet of surface water.” *Id.*

Agency (PC 3027)

The Agency disputed NRCS’s comment that this subsection intends “to ensure that within 200 feet of surface water, livestock waste applied must be injected or incorporated within 24 hours.” PC 30 at 2; *see* PC 3027 at 24. The Agency stated that proposed Section 502.645 “prohibits land application within 200 feet of surface waters,” and this subsection “requires injection or incorporation within 24 hours of livestock waste land application on fields that are within 200 feet of surface waters or contain surface waters within the field.” PC 3027 at 24. The Agency added that this 200-foot setback is based upon the LMFA. *Id.*, citing 510 ILCS 77/20(f) (2012), TSD at 55-56. The Agency recommended that the Board decline to adopt this change. PC 3027 at 24.

Agricultural Coalition (PC 3030)

The Agricultural Coalition stated that the Board’s proposal “appears to limit application of livestock waste on the entire field, even though the majority of the field is farther than 200 feet from surface waters.” PC 3030 at 28. The Coalition argued that it will be confusing to implement this requirement because “field sizes can vary considerably and runoff from a single field can flow in several directions, depending on the watershed divides.” *Id.* citing *id.*, Attachment D at 3 (¶15).

The Agricultural Coalition requested that the Board revise subsection (c)(6) as follows:

- 6) where surface waters are on the assessed field or within 200 feet of the field, the livestock waste applied to portions of the field that are within 200 feet of surface waters shall be injected or incorporated within 24 hours after the application or equivalent conservation practices must be installed and maintained on the field pursuant to USDA-NRCS practice standards. PC 3030 at 28.

Environmental Groups (PC 3031)

The Environmental Groups disagreed with NRCS’s proposed language, arguing that it would violate the waste management plan provisions of the LMFA. PC 3031 at 13, citing 510 ILCS 77/20(f)(6) (2012). The Groups added that the suggested language would also be inconsistent with the Board’s proposed Section 502.645(b)(1) establishing a land application setback from waters. PC 3031 at 13.

Agency Response (PC 3042)

The Agency did not support the Agricultural Coalition’s proposed amendment of this subsection. PC 3042 at 10. The Agency noted that proposed Section 502.645 prohibits land application of livestock waste within 200 feet of surface waters. *Id.* at 9-10. The Agency further noted that federal rules “require a minimum 100 feet setback from surface waters or a 35 feet vegetative buffer between the land application area and surface waters unless alternative conservation practices provide equivalent pollution reduction to the 100 feet setback as demonstrated by the CAFO.” *Id.* at 10. The Agency also stated that the 200 feet setback from surface waters is derived from Section 20(f) of the Illinois’ Livestock Management Facilities Act. *Id.*, citing 510 ILCS 77/20 (2013); TSD at 55-56.

Board Discussion

At first notice, the Board adopted the Agency’s proposed Section 502.615(c)(6). *See* Board Opinion at 83, 309. The Agency noted that Section 502.615(c)(6) provides that, “where surface waters are on the assessed field or within 200 feet of the field, livestock waste must be injected or incorporated within 24 hours of application.” SR at 66. The Agency’s proposed requirement does not distinguish between the entire assessed field and the portions of that field within 200 feet of surface waters in requiring injection or incorporation. *See id.* Section

502.615(c) intends to define the scope of nitrogen-based application based on the potential for nutrients to be transported to waters of the United States. *Id.* at 65. This potential depends on factors including proximity to surface waters. *Id.*

In addition, proposed Section 502.615(c)(1) provides that nitrogen-based application must be consistent with the land application setback requirement at Section 502.645(b)(1). That provision prohibits the land application of livestock waste within 200 feet of surface water unless the water is upgrade or there is adequate diking. Where livestock waste can be land applied within 200 feet of surface water because the water is upgrade or adequately diked under the exceptions in Section 502.645(b)(1), then waste applied within 200 feet of the surface water must be injected or incorporated within 24 hours to protect the surface water.

Based on these factors, the Board is not persuaded that it should limit subsection (c)(6) only to portions of the assessed field that are within 200 feet of surface waters. In addition, the Board does not consider its first-notice proposal to be confusing when applied to an entire assessed field as opposed to portions of that field, as asserted by the Agricultural Coalition. Accordingly, the Board declines to make the changes recommended by the Agricultural Coalition.

Section 502.615(d)(3): Phosphorus-Based Application
Board’s First-Notice Proposal

The Board proposed Section 502.615(d)(3) providing that

- d) Phosphorus-based application of livestock waste must be conducted consistent with the following requirements:
 - * * *
 - 3) if the soil contains greater than 50 pounds of available soil phosphorus per acre (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), phosphorus-based application rates must be neutral during the nutrient management plan period. PC 3030 at 28, citing Board Opinion at 309.

USDA – NRCS (PC 30)

NRCS favored clarification of the term “neutral” as applied to phosphorus-based application rates. PC 30 at 2. NRCS argued that “[i]t is reasonable to allow some buildup of Phosphorus (P) above a soil test of 50.” *Id.* NRCS stated that build-up requires application of phosphorus at rates “higher than the amount removed by the next year’s crop.” *Id.* NRCS suggested that “‘neutral’ be defined as an application amount based on crop nitrogen needs between soil test phosphorus levels of 50 and 300, at which time [Section] 502.615(d)(4) requires application based on the crop’s P needs for the next year.” *Id.*

Agricultural Coalition (PC 3030)

The Agricultural Coalition cited Dr. Funk’s statement that this provision intends “to limit the long-term buildup of phosphorus in the fields used for land application of livestock waste.” PC 3030, Attachment D at 4 (¶18). The Coalition stated that Section 502.615(c)(2) establishes the trigger to use a phosphorus-limited application rate: “median soil phosphorus test greater than 300 pounds per acre.” *Id.*; PC 3030 at 28. The Coalition cited the Illinois Agronomy Handbook, which “implies optimum phosphorus test of 50-70 pounds per acre, depending on the area of the state, as soils have different phosphorus supplying power.” PC 3030 at 28-29.

The Agricultural Coalition proposed to amend this subsection, arguing that that the amendment “would result in a more understandable regulatory provision and cause stable or decreasing soil phosphorus concentration (soil test P) over the duration of the plan period.” PC 3030 at 29. The Coalition further argued that the “reduction would then be favorable to reducing phosphorus transport potential from that area of the field.” *Id.* The Coalition’s proposed amendment provides that

- 3) if the soil contains greater than ~~50 pounds~~ the agronomic optimum of available soil phosphorus per acre, but less than 300 pounds per acre, (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), ~~phosphorus-based application rates must be neutral~~ phosphorus should be applied at rates calculated to maintain or lower the phosphorus soil test during the nutrient management plan period. *Id.*

Environmental Groups (PC 3031)

The Environmental Groups noted the Agency’s view that “phosphorus-based application should be neutral because there are fewer environmental protections required than is the case for nitrogen-based application.” PC 3031 at 14, citing Tr.1 at 144-45. The Groups stated that, “while we do not disagree with NRCS that describing what is meant by ‘neutral’ could improve the clarity of the rule, we disagree with their proposed language.” PC 3031 at 14. The Groups argued that the NRCS proposal “would allow for phosphorus buildup over the permit cycle.” *Id.* The Environmental Groups claimed that “[a] better interpretation of ‘neutral’ is that soil test phosphorus will be the same at the end of the NPDES permit cycle as it was at the beginning.” *Id.*

Agency Response (PC 3042)

The Agency did not support the Agricultural Coalition’s proposed amendment to Section 502.615(d)(3). PC 3042 at 10-11. The Agency stated that the Agricultural Coalition’s use of “agronomic optimum of available phosphorus” is not clearly defined or determined in either the proposed rule or in the Illinois Agronomy Handbook. *Id.* at 10. Further, the Agency stated that the Illinois Agronomy Handbook recommends different levels of available soil test phosphorus based on the crop grown. *Id.* The Agency indicated that, “[s]ince crops are grown in rotation on

the same sites[,] this may create a fluctuating criteria for application of these requirements in Section 502.615 to a particular site that will vary from crop to crop.” *Id.* Finally, the Agency argued that its Technical Support Document explained the proposed criterion of 50 pounds of available phosphorus per acre. *Id.*, citing TSD at 23-24.

Board Discussion

The Board notes that the proposed 50 pounds per acre available soil phosphorus threshold reflects the Agency’s original proposal. The Agency cited the Illinois Agronomy Handbook to state that soils with more than 50 pounds of available phosphorus do not require phosphorus buildup for the next crop grown. TSD at 23, citing SR, Attachment R at 101-02. The Agency described neutral application as limiting phosphorus application “to only the amount of phosphorus that can be used by the crops grown during the nutrient plan period.” *Id.* The Agency contended that, by limiting application rates to a neutral basis, the proposal reduces the potential for phosphorus runoff to surface waters.

In addition, the Agency opposed the Agricultural Coalition’s recommendation to use “agronomic optimum” instead of the numeric threshold. PC 3042 at 10. The Agency claimed that the Agronomy Handbook does not clearly provide how “agronomic optimum of available phosphorus” is defined or determined. *Id.* The Agency also contended that the Coalition’s recommendation may result in a standard that shifts from crop to crop with rotation at a particular site. *Id.*

The Board notes the Illinois Agronomy Handbook’s recommendation that soil test phosphorus be built up to 40, 45, and 50 pounds per acre for soils in the high, medium and low phosphorus-supplying regions, respectively, to ensure soil phosphorus availability will not restrict crop yield. SR, Attachment R at 101. Therefore, the Board finds that the proposed threshold of 50 pounds per acre is a reasonable numeric threshold to limit phosphorus application on a statewide basis. Further, the Board agrees with the Agency that the use of the term “agronomic optimum” instead of the numeric threshold would be vague. Thus, the Board declines to replace the proposed 50 pounds per acre available soil phosphorus threshold with “agronomic optimum.” However, the Board will clarify the term “neutral” in subsection 502.615(d)(3) as suggested by the Agricultural Coalition.

For second-notice review, the Board proposes to amend Section 502.615(d)(3) as follows:

- d) Phosphorus-based application of livestock waste must be conducted consistent with the following requirements:
 - * * *
 - 3) if the soil contains greater than 50 pounds of available soil phosphorus per acre (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), phosphorus-based application rates must maintain or lower the soil test phosphorus ~~be neutral~~ during the nutrient

management plan period. PC 3030 at 28, citing Board Opinion at 309.

Section 502.620(f): Protocols to Land Apply Livestock Waste

Board's First-Notice Proposal

The Board proposed Section 502.620(f) providing that

[s]urface land application may be used when the land slope is no greater than 5% or when the yearly average soil loss calculated using Revised Universal Soil Loss Equation is equal to or less than 5 tons per acre per year or Erosion Factor T, whichever is less, regardless of slope. Injection or incorporation within 24 hours shall be used when the land slope is greater than 5% and the yearly average soil loss calculated using Revised Universal Soil Loss Equation is greater than 5 tons per acre per year or Erosion Factor T, whichever is less. Board Opinion at 311.

USDA – NRCS (PC 3030)

NRCS stated that this proposed subsection establishes requirements for land application of livestock waste where average soil loss is greater than Erosion Factor T. PC 30 at 2. NRCS characterizes this requirement as “a significant change.” *Id.* NRCS argued that, “[t]o avoid confusion, the language needs to be very specific on which soil ‘T’ applies, given the typical field with multiple soil types present.” *Id.* For determining dominant critical soil type, NRCS recommended relying upon “Agronomy Technical Note IL-3, available in Section 1 of the Illinois NRCS Field Office Technical Guide.” *Id.*

Agricultural Coalition (PC 3030)

In an affidavit submitted by the Agricultural Coalition with its comment, Dr. Funk stated that “[t]he ‘dominant critical soil type’ should be the soil type considered for the limiting erosion factor for the field,” as determined by the RUSLE2 model calculation.” PC 3030, Attachment D at 4 (¶21). Dr. Funk argued that the Board’s proposal uses RUSLE2 to predict phosphorus transport from an entire field, although that “calculation is recognized only as a pointwise soil erosion model.” *Id.* at 4-5. Dr. Funk claimed that the Board’s proposed application of RUSLE2 does not reflect the intent of its developers. *Id.* at 5. For appropriate use of RUSLE2, Dr. Funk recommended that “the part of the field that is critical for runoff should be specified, and that part is referred to as the ‘dominant critical soil type,’ determined through guidance from Agronomy Technical Note IL-3, available in Section 1 of the Illinois Natural Resources Conservation Service (NRCS) Field Office Technical Guide.” *Id.*

The Agricultural Coalition and Dr. Funk recommended that the Board amend subsection (f) to provide that

[s]urface land application may be used when the land slope is no greater than 5% or when the yearly average soil loss calculated for the dominant critical soil type

in the field using Revised Universal Soil Loss Equation is equal to or less than 5 tons per acre per year or Erosion Factor T, whichever is less, regardless of slope. Injection or incorporation within 24 hours shall be used when the land slope is greater than 5% and the yearly average soil loss calculated for the dominant critical soil type in the field, using Revised Universal Soil Loss Equation is greater than 5 tons per acre per year or Erosion Factor T, whichever is less. PC 3030, Attachment D at 5 (¶22).

Agency Response (PC 3042)

The Agency agreed with the Agricultural Coalition and USDA-NRCS Agronomy Technical Note IL-3

that steep slopes on portions of the fields in livestock waste land application areas should be evaluated with regard to determining erosion rates calculated using RUSLE 2 and also with regard to whether these areas are suitable for land application of livestock waste or should be planted in a permanent cover for wildlife and recreation. *Id.* at 5.

The Agency stated that Agronomy Technical Note IL-3 “describes a method for on-site field assessment and measurement for determination of ‘dominant critical area’ to be used in the RUSLE 2 calculation of estimated soil erosion.” *Id.*

The Agency noted that USDA-NRCS soil maps and soil surveys provide information on various soil types and associated slopes. PC 3042 at 5. The Agency further noted that “USDA-NRCS soil maps and soil survey provide information on various soil types and associated slopes for each soil type. Typical ranges of slopes are commonly shown as 0-2 percent or 2-5 percent, etc. . . .” *Id.* The Agency stated that this information can be used in the RUSLE2 calculation “if the soil maps and topographic maps or other available data represents the steepest slopes to receive livestock waste.” *Id.* However, the Agency claimed that additional data should be obtained to verify slopes or the areas of steep slopes using a method such as that in Agronomy Technical Note IL-3 if “the nutrient management planner or livestock producer determines this available data does not represent the steepest slopes avoided for land application.” *Id.*

The Agency noted that the Agricultural Coalition’s comment suggested that “a single dominant critical area would be determined for an entire field.” PC3042 at 5. The Agency stated that

the RUSLE 2 calculation may need to be used separately on several areas of a field if different slope ranges for different soil types on soil maps exist, or the slopes shown from other data in the livestock waste application field application area are 5 percent or greater, in order to meet the Board’s proposed Section 502.620(f) and 502.615(c)(3) and other proposed Sections of the rule that use RUSLE 2 to determine estimated soil erosion rates. PC 3042 at 5-6.

In addition, the Agency stated that figures 1, 2, and 3 of Agronomy Technical Note IL-3 show areas where erosion control or land application practices would be required. PC 3042 at 6. The Agency noted, however, that these areas have slopes of 50 to 100 percent. *Id.* The Agency argued that these areas “should not be used for land application of livestock waste as runoff of livestock wastes may occur to the flood plain or to conduits to surface water or surface waters.” *Id.* The Agency further stated that injection or incorporation of livestock waste on these steep slopes “may not meet conservation practices for farming on the contour, or may not be practical or safe for equipment operation due to rollovers.” *Id.* The Agency claimed that incorporating waste up and down the slope “will cause greater erosion and promote development of gullies in the land forming new conduits to surface waters with erosion and discharge of the livestock waste to surface waters.” *Id.* The Agency argued that it is erroneous to use Agronomy Technical Note IL-3 as guidance or a requirement because it “may imply that such areas may be acceptable for livestock waste application.” *Id.*

The Agency therefore did “not support limitation of the RUSLE2 calculation to a single ‘dominant critical soil type in the field.’” *Id.* at 7. Instead, the Agency stated that “[a] clarifying statement could be added to the Board’s proposed rule that fields with varying or steep slopes may need to be divided into separate areas for determination of soil erosion estimates using RUSLE 2 and compliance with 502.620(f).” *Id.*

Board Discussion

The Board agrees with the Agency that the use of a “single dominant critical soil type” for a field would not necessarily protect surface waters from runoff of livestock waste. The annual soil loss calculated for a single critical dominant area may not meet requirements of the proposed provisions that rely on RUSLE2 to estimate soil erosion rates. Thus, RUSLE2 calculations may need to be used separately for multiple areas of a field if different slope ranges for different soil types exist on soil maps. The Board is also reluctant to require use of Technical Note No. II-3 because, as noted by the Agency, this may allow application of livestock waste in areas prohibited from such application under the proposed regulations. Therefore, the Board declines to make the changes recommended by the Agricultural Coalition to Section 502.620(f).

However, the Board will clarify subsection (f) as suggested by the Agency to clarify its intent. The Board will add the sentence “[f]ields with varying or steep slopes must be divided into separate areas for calculating yearly average soil loss using RUSLE2 to comply with this subsection” as reflected in the order below. In addition, the Board Note to this subsection is expanded to describe more specifically the availability of the RUSLE2 software and Erosion Factor T for Illinois Soils.

Section 502.620(g): Protocols to Land Apply Livestock Waste

Board’s First-Notice Proposal

The Board proposed Section 502.620(g) providing that “[l]and application of livestock waste is prohibited on slopes greater than 15%.” Board Opinion at 311.

Agricultural Coalition (PC 3030)

In an affidavit submitted by the Agricultural Coalition with its comment, Dr. Funk stated that “[t]he Illinois NRCS 590 standard allows land application of livestock waste on slopes greater than 15% if injection or incorporation is used. PC 3030, Attachment D at 5 (¶24). Dr. Funk claimed that, “since the provision relies on RUSLE2 calculation to determine which methods may be used for land application of livestock waste, it is important to note that impacts of such land application methods are embodied in the RUSLE2 model.” *Id.* He suggested that application of RUSLE2 may limit or prohibit land application on slopes greater than 15%. *Id.*

The Agricultural Coalition and Dr. Funk recommended that the Board delete subsection (g) from its proposal. *Id.* (¶25); PC 3030 at 31.

Environmental Groups’ Response (PC 3041)

The Environmental Groups recommended maintaining the language proposed in the Board’s first notice opinion and order. PC 3041 at 3. The Environmental Groups noted that Illinois NRCS Waste Utilization 633 Conservation Practice Standard included this prohibition, but the new Illinois NRCS Nutrient Management 590 Standard allows application on slopes greater than 15 percent if the waste is incorporated or injected. *Id.*, citing TSD at 31.

The Environmental Groups stated that, while the NRCS 590 Standard was modified in 2013, the last draft in November 2012 contains only one similar provision: “[m]anure may be surface applied to *pasture* without injection or incorporation on slopes up to 15%.” PC 3041 at 3 (emphasis in original). The Environmental Groups did not support removing the prohibition of waste application on slopes greater than 15 percent because “we have not seen scientific evidence to support the weakening of NRCS’s standards, nor did the Agricultural Coalition provide scientific evidence of their own.” *Id.* The Environmental Groups stated that the likelihood of runoff increases with slope. *Id.* The Groups also noted the Agency’s position that prohibiting waste application on slopes greater than 15 percent is essential. *Id.*, citing TSD at 31.

The Environmental Groups contended that Illinois’ livestock regulations “have not been written to achieve complete consistency with NRCS standards” and “the 590 Standard defers to state regulations.” PC 3041 at 3. The Environmental Groups therefore suggested that, instead of deleting proposed subsection (g), the Board should consider the following language:

- g) Land application of livestock waste is prohibited on slopes greater than 15% unless injected or incorporated within 24 hours. *Id.*

The Environmental Groups believe this would create a more stringent criterion on slopes greater than 15 percent, but that this amendment poses pollution threats because “on such steep slopes the soil disturbance caused by incorporation could lead to greater erosion and associated waste loss.” *Id.*

Agency Response (PC 3042)

The Agency “strongly recommends” that the Board adopt the language proposed at first notice. PC 3042 at 8. The Agency noted that neither the USDA-NRCS’s draft User’s Reference Guide Revised Universal Soil Loss Equation 2 nor the USDA-NRCS’s Agronomy Technical Note IL-3 indicates that RUSLE2 estimates gully erosion. *Id.* at 7 (citation omitted). The Agency claimed that gully erosion can make up to one half or more of the total sediment eroded on a field. The Agency added that gully erosion may be induced by the injection or incorporation of livestock waste up and down the slopes of livestock waste land application sites. *Id.* The Agency argued that this “will cause poor soil erosion control and poor conservation practice on the field.” *Id.* at 7-8. The Agency further argued that this practice will also increase sheet and rill erosion “compared to injection and incorporation on the contour.” *Id.* at 8.

The Agency claimed that the record does not support the Agricultural Coalition’s proposed revision of subsection (g). PC 3042 at 8. The Agency noted that the Agricultural Coalition “has not indicated what provisions in the new Illinois NRCS standard 590, issued in December 2013, offsets the prohibition to land apply by injection or incorporation on slopes of greater than 15 percent of the previous Illinois NRCS Standard 633.” *Id.* The Agency also stated that the Coalition “has not provided the reasons the prohibition to land apply on slopes greater than 15 percent was modified in the USDA-NRCS standard.” *Id.*

Board Discussion

The Board notes that the proposed prohibition of land application of livestock waste on slopes greater than 15 percent is based on Illinois NRCS Code 633 and is intended to ensure that cropland meets soil loss tolerance. TSD at 31. The Illinois NRCS Code 633 prohibits waste application to “cropland” with slopes greater than 15 percent, but allows application on pastureland, hayland, and land used for meadow crops with slopes up to 20 percent. Illinois NRCS Code 633, January 2002 at 633-1. Although the proposed prohibition does not distinguish between types of agricultural land, the Board finds that the proposed 15 percent slope prohibition is consistent with Illinois NRCS Code 633 since the proposed nutrient management requirements at Section 502.505 address livestock waste application for growing crops.

Regarding Illinois NRCS Code 590, the Board agrees with the Agency and the Environmental Groups that the record lacks the rationale behind the NRCS’s change from a prohibition to a conditional restriction. *See* Illinois NRCS Code 590, Nutrient Management, December 2013 at 590-4. Particularly, there is no discussion on the issue of gully erosion, which according to the Agency can have a significant impact on soil loss. Also, the Agricultural Coalition recommendation would eliminate a slope-based limitation on waste application. The Agency and Environmental Groups have raised pollution and safety factors associated with application on steep slopes. PC 3042 at 7; PC 3041 at 4. Finally, other than a statement by the Environmental Groups, there is no indication in the record as to whether the Illinois NRCS Code 590 has replaced Illinois NRCS Code 633. Therefore, the Board declines to delete the proposed prohibition at Section 502.620(g) as recommended by the Agricultural Coalition.

Section 502.620(h): Protocols to Land Apply Livestock Waste

Board's First-Notice Proposal

The Board proposed Section 502.620(h) providing that "[l]iquid livestock waste shall not be applied to land with less than 36 inches of soil covering fractured bedrock, sand or gravel." Board Opinion at 311.

USDA – NRCS (PC 30)

NRCS stated that this provision prohibiting the land application of livestock waste to land with less than 36 inches of soil covering fractured bedrock, sand, or gravel "will protect the environment." PC 30 at 2. However, NRCS suggested that it would be difficult to demonstrate soil depth in each NMP. *Id.* NRCS argued that it would be "prohibitively expensive" to conduct an extensive geologic investigation of each field on which waste would be applied. *Id.* NRCS stated that, while nutrient management planners may refer to the NRCS soil survey, it "is not mapped to a close enough scale to exclusively allow or exclude a particular site, where natural variations from the norm can and do exist." *Id.* Consequently, NRCS favored striking this proposed subsection. *Id.* If the Board chooses to retain it, NRCS recommended "adding clarification as to an acceptable protocol (such as the soil survey) for delineating locations where the soil cover over fractured bedrock, sand or gravel is less than 36 inches." *Id.*

Mr. Panno (PC 1175)

Mr. Panno claimed that, because the proposed soil depth of 36 inches is the equivalent of 0.91 meters, "the determinations of soil thickness should be straight forward." PC 1175 at 4. He stated that "we use a five foot long soil probe (standard length) to determine soil depth over bedrock" where soil depth may be less than five feet. *Id.* He added that this soil probe "is low tech and relatively cheap (less than \$20) and is nearly indestructible." *Id.* Mr. Panno further claimed that "[a] field can be probed in a very short period of time and if the prober has a GPS or smart phone app, the survey may be done very quickly." *Id.*

Mr. Panno stated that "[m]ost of Illinois has soil thicknesses well in excess of 1.52 m and for those areas a NRCS soil survey would suffice." PC 1175 at 4. He clarified that, "[i]n those areas with thin soils, a point density doesn't need to be more than 10 locations per field (*i.e.*, as a grid)." *Id.* He added that "[t]his effort, combined with drill log data from the Illinois State Geological Survey (available on line) and an NRCS soil survey, should yield a representative estimate of soil thickness." *Id.*

Agricultural Coalition (PC 3030)

The Agricultural Coalition noted that the Agency's original subsection (h) proposed a soil depth of 10 inches covering fractured bedrock, sand or gravel. PC 3030 at 33; *id.*, Attachment 4 at 1 (¶4). Dr. Funk noted that the Board's proposal referred to a northeast Wisconsin Karst Task Force Report (2007) as a source of its proposed revisions. PC 3030, Attachment E at 1 (¶5). The Agricultural Coalition argued that this report addressed a five-county area in Wisconsin. PC 3030 at 33; *id.*, Attachment E at 1, 3 (¶¶5, 9). Mr. Trainor indicated that applying

recommendations geared to that area to subsection (h) is too restrictive and “extends the rule to many areas in Illinois that would be prohibited from land application, with no scientific justification.” PC 3030, Attachment E at 3 (¶11); PC 3030 at 33. Mr. Trainor added that the proposed soil depths “will eliminate many areas for potential manure spreading within Illinois, with little environmental benefit.” PC 3030, Attachment E (¶14); PC 3030 at 33. The Agricultural Coalition further argued that the recommendations in the report have not been adopted as Wisconsin regulations. PC 3030 at 33; *id.*, Attachment E at 3 (¶10). Mr. Trainor stated that the proposed requirements “will necessitate extensive field studies to assure the limits are not breached.” PC 3030, Attachment E at 3 (¶12); *see* PC 3030 at 33.

The Agricultural Coalition and Mr. Trainor recommended that the Board submit the Agency’s originally proposed language to Second Notice: “[l]iquid livestock waste shall not be applied to land with less than 10 inches of soil covering fractured bedrock, sand or gravel.” PC 3030 at 34; *see id.*, Attachment E at 4 (¶14).

Environmental Groups (PC 3031)

The Environmental Groups agreed with NRCS that this proposed subsection “will protect the environment” but disagreed with NRCS’s recommendation to delete it. PC 3031 at 14. The Groups agreed “that it would be helpful to provide examples of resources and protocols that should be used to classify the fields. In addition to the NRCS soil survey, soil probes could be used.” *Id.*

Board Discussion

The Board addressed the issue of soil depth restrictions for land application of livestock waste on fractured bedrock, bedrock, sand, and gravel in detail at first notice. See Board Opinion at 226-28. Increasing the depth of soil thickness proposed by the Agency intended to minimize the impact of livestock waste application on groundwater. *Id.* at 227. The Agency’s view that liquid livestock waste passes rapidly through fractured bedrock, sand and gravel to infiltrate groundwater and Mr. Panno’s testimony convinced the Board that additional soil depth to those formations is necessary to minimize the groundwater impact of land application of livestock waste. However, since the Board found Mr. Panno’s recommendation to require 50 feet of unconsolidated material over a karst aquifer overly restrictive, the Board relied on the northeast Wisconsin Task Force Report (PC 20, Attachment 6) to specify soil thickness. While the Board recognizes that the Wisconsin Report is focused on five counties in northeastern Wisconsin, the Report addresses the issue of the vulnerability of carbonate bedrock to contamination from land application of livestock waste. In this regard, Mr. Panno noted that carbonate rock comprises approximately 25 percent of the bedrock surface in Illinois and is a major source of groundwater in Illinois. PC 1175 at 1. Further, as noted above, movement of liquid livestock waste through fractured bedrock, sand, and gravel formations poses similar threat to groundwater. Therefore, the Board continues to believe that it is appropriate to rely on the Wisconsin Report for guidance to specify additional soil depths to the pertinent formations.

Regarding determination of the thickness of soil or unconsolidated material, the Board does not believe that extensive field studies will be necessary to comply with the proposed

restriction. The Board agrees with Mr. Panno that determining the depth of soil cover up to five feet will not be complicated or cost prohibitive. For most areas in the state where soil thickness is greater than five feet, information from the NRCS soil survey may be used to determine the adequacy of soil cover. In other areas, soil probes, which Mr. Panno describes as simple and relatively inexpensive, may be used to determine soil depth.

Therefore, the Board declines to change the proposed soil depth as recommended by the Agricultural Coalition and NRCS. Further, the Board notes that the Agency did not comment on the Board's first-notice proposal for this provision. However, the Board will provide examples of resources and protocols that may be used to classify the fields as suggested by NRCS and the Environmental Groups. These examples include NRCS soil surveys, well log data from the Illinois State Geologic Survey, soil probes, and well points. Accordingly, the Board amends its proposed Section 502.620(h) as follows:

- h) Liquid livestock waste shall not be applied to land with less than 36 inches of soil covering fractured bedrock, sand or gravel. The depth of soil cover may be determined by using NRCS soil surveys, Illinois State Geological Survey well logs, or soil probes.

Section 502.620(j): Protocols to Land Apply Livestock Waste

Board's First-Notice Proposal

The Board proposed in Section 502.620(j) that "[l]ivestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when there is less than 60 inches of unconsolidated material over bedrock." Board Opinion at 311.

USDA-NRCS (PC 30)

NRCS again claimed that it will be difficult to measure soil depth without an onsite geologic investigation. PC 30 at 3. NRCS also argued that it "is unaware of any scientific basis for the 60 inch threshold." *Id.* NRCS recommended striking this subsection. *Id.* NRCS stated that, if the Board chooses to retain this provision, it should add "clarification as to an acceptable protocol for the delineation of these areas." *Id.*

Mr. Panno (PC 1175)

Mr. Panno claimed that, because the proposed depth of 60 inches is the equivalent of 1.52 meters, "the determinations of soil thickness should be straight forward." PC 1175 at 4. As explained above, he stated that "we use a five foot long soil probe (standard length) to determine soil depth over bedrock" where soil depth may be less than five feet. *Id.* He added that this soil probe "is low tech and relatively cheap (less than \$20) and is nearly indestructible." *Id.*

Agricultural Coalition (PC 3030)

The Agricultural Coalition and Mr. Trainor recommended that the Board submit to second notice the Agency's originally proposed language: "[l]ivestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when there is less than 20 inches of unconsolidated material over bedrock." PC 3030 at 34; *id.*, Attachment E at 7 (¶23). The Coalition opposed the Board's first-notice proposal for the reasons noted above under Section 502.620(h).

Environmental Groups (PC 3031)

The Environmental Groups disagreed with NRCS's recommendation to strike this subsection and stated that "scientific evidence to support this provision was previously submitted." PC 3031 at 14. However, the Groups agreed with NRCS "that it would be a helpful clarification if examples of resources and protocols could be provided (*e.g.*, NRCS soil survey, soil probes, drill log data from water wells)." *Id.*

Board Discussion

The Board addressed the issue of the soil depth restriction where there is less than 60 inches of unconsolidated material over bedrock in detail at first notice. *See* Board Opinion at 226-28. Increasing the depth of soil thickness proposed by the Agency intended to minimize the impact of livestock waste application on groundwater. *Id.* at 227. The Agency's view that contaminants in livestock waste reach groundwater more quickly without adequate soil depth over bedrock and Mr. Panno's testimony convinced the Board that additional soil depth is necessary to minimize the groundwater impact of land application of livestock waste. However, since the Board found Mr. Panno's recommendation to require 50 feet of unconsolidated material over a karst aquifer overly restrictive, the Board relied on the northeast Wisconsin Task Force Report (PC 20, Attachment 6) to specify soil thickness. While the Board recognizes that the Wisconsin Report is focused on five counties in northeastern Wisconsin, the Report addresses the issue of the vulnerability of carbonate bedrock to contamination from land application of livestock waste. In this regard, Mr. Panno noted that carbonate rock comprises approximately 25 percent of the bedrock surface in Illinois and is a major source of groundwater in Illinois. PC 1175 at 1. Further, as noted above, inadequate soil depth over bedrock will help cause livestock waste contaminants to reach groundwater more quickly. Therefore, the Board continues to believe that it is appropriate to rely on the Wisconsin Report for guidance to specify additional soil depths to the pertinent formations.

Regarding determination of the thickness of soil or unconsolidated material, the Board does not believe that extensive field studies will be necessary to comply with the proposed restriction. The Board agrees with Mr. Panno that determining the depth of soil cover up to five feet will not be complicated or cost prohibitive. For most areas in the state where soil thickness is greater than five feet, information from the NRCS soil survey may be used to determine the adequacy of soil cover. In other areas, soil probes, which Mr. Panno describes as simple and relatively inexpensive, may be used to determine soil depth.

Therefore, the Board declines to change the proposed soil depth as recommended by the Agricultural Coalition and NRCS. However, the Board will provide examples of resources and protocols that may be used to classify the fields as suggested by NRCS and the Environmental Groups. These examples include NRCS soil surveys, well log data from the Illinois State Geologic Survey, soil probes, and well points. Accordingly, the Board amends its proposed Section 502.620(j) as follows:

- j) Liquid livestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when there is less than 60 inches of unconsolidated material over bedrock. The depth of unconsolidated material may be determined by using NRCS soil surveys, Illinois State Geological Survey well logs, or soil probes

Section 502.620(k): Protocols to Land Apply Livestock Waste

Board's First-Notice Proposal

The Board proposed in Section 502.620(k) that “[l]ivestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when the minimum soil depth to seasonal high water table is less than or equal to 2 feet.” Board Opinion at 311.

USDA – NRCS (PC 30)

NRCS again stated that it would be difficult to establish this depth of two feet to the seasonal high water table without an onsite geologic investigation. Pc 30 at 2. NRCS stated that, if the Board chooses to retain this provision, it should add “clarification as to an acceptable protocol for the delineation of these areas.” *Id.*

Mr. Panno (PC 1175)

Mr. Panno acknowledged that determining soil thickness to the seasonal high water table “is slightly more difficult.” PC 1175 at 4. He stated that, “with a water table 0.61 m below ground surface, a couple of short 0.76 m long drive point wells could be driven into the ground at the perimeter (corners?) of the field and monitored during wet periods of the year to determine if the field exceeds the regulatory limit.” *Id.* He argued that “determinations of these parameters do not appear to be prohibitively expensive given the costs of site characterization.” *Id.*

Environmental Groups (PC 3031)

The Environmental Groups opposed striking this subsection but agreed “that it would add clarity” to provide examples of acceptable protocols for determining seasonal high water table. PC 3031 at 14. The Groups also argued that 35 Ill. Adm. Code 560.203 (Proximity to Water) contains a similar requirement to determine the high water table, but they characterized that requirement as “insufficiently prescriptive.” *Id.*

Board Discussion

NRCS claimed that it would be difficult to determine this soil depth. PC 30 at 2. While Mr. Panno acknowledged that it is somewhat more difficult to determine soil depth to the seasonal high water table than to other features, it does not require prohibitive expense. *See* PC 1175 at 4. NRCS again recommended that, if the Board decides to retain the restriction, it should clarify the requirement by including acceptable protocols for measuring that depth. The Environmental Groups cited design criteria for field application as precedent for a requirement of this nature, but that provision provides only that “[c]onservative loading rates should be used in the case of a high water table. . . .” 35 Ill. Adm. Code 560.203 (Proximity to Water). The Groups agreed, however, that examples of resources and protocols for classifying fields would be helpful. PC 3031 at 14.

Accordingly, the Board amends Section 502.620(k) as follows:

- k) Livestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when the minimum soil depth to seasonal high water table is less than or equal to 2 feet. The depth of soil to seasonal high water table may be determined by using information from NRCS soil surveys, soil probes, and water table levels from Illinois State Geological Survey well log data or well points.

Section 502.625(b): Determination of Livestock Waste Application Rates

In Section 502.625(b), the Agency had proposed two sources that facilities may use to calculate the amount of livestock waste generated. Board Opinion at 231. Based on testimony at hearing, the Board proposed three additional source for this calculation. *Id.* at 232, 312. One of those sources, ASABE Standard D384.2, is not now included in the Board’s record and cannot be duly incorporated by reference. *See* 5 ILCS 100/5-75(c) (2012). Accordingly, the Board in its order below deletes that standard from this subsection. In doing so, the Board retains four sources for estimating waste volumes, each of which is either a regulatory provision or materials incorporated by reference.

Section 502.630(a)(1)(A): Protocols to Land Apply Waste During Winter

Board’s First-Notice Proposal

The Board proposed Section 502.630(a)(1)(A) providing that

- 1) Surface land application of livestock waste on frozen, ice covered or snow covered ground is prohibited, unless:
 - A) No practical alternative measures are available to handle the livestock waste within storage facilities or to dispose the livestock waste at other sites. Examples of practical alternative measures include, but are not limited to, the transfer of waste to another

waste handling facility or sewage treatment plant, rental or acquisition of a storage tank, reduction of herd size or depopulation, and protection of the facility from direct precipitation and clean stormwater runoff. Board Opinion at 315.

Agricultural Coalition (PC 3030)

The Agricultural Coalition noted that the Board had amended the Agency’s proposal by providing a “non-exhaustive list of examples” of practical alternative measures to handle or dispose of livestock waste that may be taken before winter application. PC 3030 at 18, citing Board Opinion at 235. However, the Coalition argued that, by proposing a list of examples that “includes, but is not limited to,” various measures, “the Board appears to have established an enforceable *de facto* requirement that those listed measures are minimum steps that must be exercised, to which additional processes may be added.” PC 3030 at 19.

The Agricultural Coalition proposed that subsection (a)(1)(A) be amended as follows:

- 1) Surface land application of livestock waste on frozen, ice covered or snow covered ground is prohibited, unless:
 - A) No practical alternative measures are available to handle the livestock waste within storage facilities or to dispose the livestock waste at other sites. Examples of practical alternative measures may include, but are not limited to, the transfer of waste to another waste handling facility or sewage treatment plant, rental or acquisition of a storage tank, reduction of herd size or depopulation, and protection of the facility from direct precipitation and clean stormwater runoff. PC 3030 at 19.

Board Discussion

The Board agrees with the Agricultural Coalition that proposed subsection (A) provides a “non-exhaustive list of examples” of practical alternatives for handling livestock waste. However, the Board agrees that the Coalition’s proposed addition of “may” clarifies the non-exhaustive nature of the listed measures. The Board includes this amendment in its order below.

Section 502.630(a)(1)(B): Protocols to Land Apply Livestock Waste During Winter

Board’s First-Notice Proposal

The Board proposed the following Section 502.630(a)(1)(B):

- a) Winter Application Prohibition
 - 1) Surface land application of livestock waste on frozen, ice covered or snow covered ground is prohibited, unless:

* * *

- B) Liquid livestock waste cannot be injected or incorporated within 24 hours due to soil conditions. Board Opinion at 315.

USDA – NRCS (PC 30)

NRCS stated that “[i]t would be helpful to clarify the intent: to allow application of waste if injected within 24 hours, to not allow application at all within 24 hours, or to allow surface application if soil conditions are such that the waste can’t be injected.” PC 30 at 3.

Board Discussion

Section 502.630(a)(1)(B) is one of the six conditions that must be met to surface apply livestock waste on frozen, ice-covered, or snow-covered ground. As proposed, subsection (a)(1)(B) provides that this application is prohibited unless liquid livestock waste cannot be injected or incorporated within 24 hours due to soil conditions. NRCS suggested that this provision could be interpreted in a number of ways: “to allow application of waste if injected within 24 hours, to not allow application at all within 24 hours, or to allow surface application if soil conditions are such that the waste can’t be injected.” PC 30 at 3.

According to the Agency, injection or incorporation of livestock waste within 24 hours of application are the preferred methods of application on frozen ground. These methods are intended to reduce the risk of runoff. SR at 73; TSD at 39. However, the Agency stated that, “[w]hen injection and incorporation are not possible because the ground is frozen, ice covered or snow covered, surface land application is permissible in very limited circumstances.” SR at 73. Therefore, subsection (a)(1)(B) intends to allow winter surface application if injection or incorporation within 24 hours of application is not possible and if the application meets the other conditions in subsection (a)(1).

Accordingly, the Board amends Section 502.630(a)(1)(B) to clarify this intent as follows:

- a) Winter Application Prohibition. Surface land application of livestock waste on frozen, ice-covered, or snow-covered ground is prohibited except as specified in subsection (a)(1) of this Section.
- 1) Notwithstanding the winter application prohibition in subsection (a) of this Section, surface~~Surface~~ land application of livestock waste on frozen, ice covered or snow covered ground is allowed if all of the following conditions are met~~prohibited, unless:~~
- * * *
- B) Liquid livestock waste cannot be injected or incorporated within 24 hours of application due to soil conditions.

Section 502.630(a)(1)(C): Protocols to Land Apply Livestock Waste During Winter

Board's First-Notice Proposal

The Board proposed Section 502.630(a)(1)(C) providing that

- 1) Surface land application of livestock waste on frozen, ice covered or snow covered ground is prohibited, unless:
 - * * *
 - C) Prior to December 1, the owner or operator has taken steps to provide 120 days of available storage capacity of manure storage areas. Examples of steps that could be taken include, but are not limited to, land application of livestock waste, transfer of waste to another party, protection of waste storage structures from direct [precipitation and stormwater runoff, and depopulating facilities to reduce the amount of waste generated. Board Opinion at 315-16.

Agricultural Coalition (PC 3030)

The Agricultural Coalition noted that the Board had amended the Agency's proposal by providing a "non-exhaustive list of examples" of steps to provide waste storage that may be taken before winter application. PC 3030 at 18, citing Board Opinion at 235. However, the Coalition argued that by proposing a list of examples that "includes, but is not limited to," various steps, "the Board appears to have established an enforceable *de facto* requirement that those listed measures are minimum steps that must be exercised, to which additional processes may be added." PC 3030 at 19.

The Agricultural Coalition proposed that subsection (a)(1)(C) be amended as follows:

- 1) Surface land application of livestock waste on frozen, ice covered or snow covered ground is prohibited, unless:
 - * * *
 - C) Prior to December 1, the owner or operator has taken steps to provide 120 days of available storage capacity of manure storage areas. Examples of steps that could be taken may include, but are not limited to, land application of livestock waste, transfer of waste to another party, protection of waste storage structures from direct [precipitation and stormwater runoff, and depopulating facilities to reduce the amount of waste generated]. PC 3030 at 19.

Board Discussion

As it did above in addressing subsection (A), the Board agrees with the Agricultural Coalition that subsection (C) provides a "non-exhaustive list of examples" of steps to provide waste storage. However, the Board agrees that the Coalition's proposed addition of "may"

clarifies the non-exhaustive nature of the listed steps. The Board includes this amendment in its order below.

Section 502.635: Manure and Soil Sampling and Analysis

USDA – NRCS (PC 30)

NRCS suggested adoption of requirements similar to those applicable to laboratories that perform soil and manure testing as outlined in the December 2013 NRCS 590 Nutrient Management Standard. PC 30 at 3. NRCS stated that “[t]hese guidelines are to assure that the laboratories performing the testing are following established guidelines and that their testing methods give consistent results.” *Id.*

Board Discussion

The Board first notes that, although NRCS did not provide a copy of the December 2013 version of the Illinois NRCS 590 standard, the Board obtained an online copy of it. The Board also notes that the standard requires soil test analyses to be performed by laboratories meeting the requirements and performance standards of the Illinois Soil Testing Association Lab Accreditation Program (ISTA-LAP), the North American Proficiency Testing Program-Performance Assessment Program (NAPT-PAP) under the auspices of the Soil Science Society of America (SSSA) and NRCS, or other NRCS-approved program that considers laboratory performance and proficiency to assure accuracy of soil test results. Illinois NRCS 590 (December 2013) at 2. The standard also requires performance of manure testing analyses by laboratories meeting the requirements and performance standards of the Manure Testing Laboratory Certification program (MTLCP) under the auspices of the Minnesota Department of Agriculture. *Id.* at 3.

The Board recognizes that having accredited or certified laboratories perform analytical testing would help to ensure consistent and reliable results. However, the Board is reluctant to add the requirements recommended by the NRCS because the record lacks information on the availability of certified or accredited laboratories in Illinois to provide the testing services required by the standard. Further, the record is also silent on any economic implications of requiring testing to be done by accredited or certified laboratories. In light of this, the Board declines to adopt NRCS’s recommendation in proceeding to second notice in this docket.

Section 502.635(b)(2): Manure and Soil Sampling and Analysis

Board’s First-Notice Proposal

The Board proposed Section 502.635(b)(2) providing in its entirety that

[t]he laboratory analysis of the livestock waste sample shall include total kjeldahl nitrogen, ammonia or ammonium nitrogen, total phosphorus, total potassium, and percent total solids. The nutrient results shall be reported in mg/kg dry weight basis or mg/l wet weight basis on the laboratory analysis sheet. The results of

these analyses are to be used in determining application rates for livestock waste. Board Opinion at 321.

Agricultural Coalition (PC 3030)

In an affidavit submitted by the Agricultural Coalition with its comment, Dr. Funk stated that “[l]aboratories currently provide farmers with livestock waste sample data in units of lb/ton for dry weight basis and lb/1000 gal for wet weight basis.” PC 303, Attachment D at 6 (¶27). He claimed that the Board’s proposal “would require laboratories to change their current practices and begin providing the farmers with information that is not in its most useful form.” *Id.*

The Agricultural Coalition and Dr. Funk recommended that the Board amend subsection (b)(2) to provide that

[t]he laboratory analysis of the livestock waste sample shall include total kjeldahl nitrogen, ammonia or ammonium nitrogen, total phosphorus, total potassium, and percent total solids. The nutrient results shall be reported on a lb/ton or mg/kg dry weight basis or lb/1000 gal or mg/l wet weight basis on the laboratory analysis sheet. The results of these analyses are to be used in determining application rates for livestock waste. PC 3030, Attachment D at 5-6 (¶26); *id.* at 32.

Board Discussion

The Agricultural Coalition indicated that its suggested amendment would allow laboratories to continue current reporting practices. The Coalition also suggested that its amendment would provide farmers information in the most useful form. Dr. Funk’s affidavit stressed that this information is used “to determine application rates for livestock waste and calibrate manure spreaders.” PC 3030, Attachment D at 6 (¶27). The Board agrees with the Agricultural Coalition’s suggestion and amends Section 502.635(b)(2) as follows:

The laboratory analysis of livestock waste sample shall include total kjeldahl nitrogen, ammonia or ammonium nitrogen, total phosphorus, total potassium, and percent total solids. The nutrient results shall be reported in lb/ton or mg/kg dry weight basis or lb/1000 gal or mg/L wet weight basis on the laboratory analysis sheet. The results of these analyses are to be used in determining application rates for livestock waste.

Section 502.645(e): Land Application Setback Requirements

Board’s First-Notice Proposal

The Board proposed Section 502.645(e) providing that “[l]ivestock waste shall not be land applied within 200 feet of potable water supply wells.” Board Opinion at 322.

Agricultural Coalition (PC 3030)

The Agricultural Coalition and Dr. Funk stated that the LMFA establishes a setback of 150 feet. PC 3030 at 26, citing 510 ILCS 77/20(f)(6) (2012), 8 Ill. Adm. Code 900.803; PC 3030, Attachment D at 2 (¶12). Dr. Funk claimed that “Illinois farmers have received significant training in this setback required by the LMFA.” PC 3030, Attachment D at 3 (¶12). Both the Coalition and Dr. Funk also stated that this 150-foot setback exceeds the federal requirement. PC 3030 at 26; *id.*, Attachment D at 2 (¶12).

The Agricultural Coalition argued that the record does not support a 200-foot setback. PC 3030 at 26. The Coalition stated that the Agency’s proposal “is apparently based on the Illinois NRCS 633 Standard.” *Id.* at 27. The Agency claimed that this standard “is obsolete and has been replaced entirely by the Illinois NRCS 590 Standard,” which establishes a 150-foot setback. *Id.* The Coalition argued that a 150-foot setback is consistent with farmers’ training and also reflects the LMFA. *Id.* at 26-27.

The Agricultural Coalition and Dr. Funk proposed a subsection (e) providing in its entirety that “[l]ivestock waste shall not be land applied within 150 feet of potable water supply wells.” PC 3030 at 27; *id.*, Attachment D at 3 (¶13).

Board Discussion

The Agricultural Coalition questioned the proposed 200-foot setback, which exceeds the 150-foot setback in the LMFA. PC 3030 at 26, citing 510 ILCS 77/20(f)(6) (2012), 8 Ill. Adm. Code 900.803. The Agricultural Coalition also contended that the record lacks evidence supporting a 200-foot setback. PC 3030 at 26. The Agency stated that its proposed setback requirements incorporate and extend upon best management practices in the federal rules. SR at 64, *see* 40 CFR §412.4(c). The Agency added that it proposed setbacks to be consistent with the LMFA but has not specifically addressed this proposed 200-foot setback from potable water supply wells.

The Board notes that the federal CAFO rules establish a 100-foot setback from any down-gradient surface waters, open tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters. 40 C.F.R. § 412.4(c)(5). The LMFA establishes a 150-foot setback for land application of livestock waste from potable water supply wells. 510 ILCS 77/20(f)(6) (2012). In addition, Illinois regulations apply a 150-foot setback from potable water supply wells for land application of livestock waste. *See* 8 Ill. Adm. Code 900.803, 35 Ill. Adm. Code 560.203. The Board also notes that its regulations for sludge application require a setback of 150 feet from potable water supply wells. 35 Ill. Adm. Code 391.403(d). The Illinois Environmental Protection Act establishes a 200-foot setback from potable water supply wells for certain potential sources of contamination (*see* 415 ILCS 5/3.330(a)(19)(B)(i), 14.2 (2012); Public Act 98-239, eff. Aug. 9, 2013 (enacting Section 21(q)(2.5)(E)(iv)), but does not address land application of livestock waste. Because the LMFA expressly provides a 150-foot setback and the record does not include information justifying the proposed 200-foot setback from potable water supply wells, the Board will amend the setback to 150 feet.

The Board amends Section 502.645(e) as follows: “[l]ivestock waste shall not be land applied within ~~150200~~ feet of potable water supply wells.”

Section 502.840(b): Technical Evaluation

Board’s First-Notice Proposal

The Board proposed Section 502.840(b) providing that

All technical evaluations conducted pursuant to this Subpart H must address the minimum elements contained in this Section. Waste management and storage facilities designed, constructed, operated, and maintained consistent with the analysis conducted in subsections (a) through (g) of this Section and operated in accordance with the additional measures and records required by Section 502.610 will fulfill the requirements of this Subpart.

* * *

- b) The design of the open livestock waste storage structure as determined in accordance with the United States Department of Agriculture National Resource Conservation Service’s Animal Waste Management Field Handbook, incorporated by reference at 35 Ill. Adm. Code 501.200. Board Opinion at 326-37.

The proposed subsection also included a Board Note stating that

Animal Waste Management software is available at <http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/alphabetical/mmm/?&cid=stelprdb1045812> and includes procedures and calculation based on the Animal Waste Management Field Handbook for design of open livestock waste storage units. *Id.* at 327.

Agency (PC 3027)

The Agency stated that the NRCS Animal Waste Management (AWM) software “is used to estimate the production of manure, bedding and process water and determine the size of storage facilities.” PC 3027 at 14. The Agency noted that the Board had removed a reference to the software from this subsection and instead required design of waste storage structures according to NRCS’s Animal Waste Management Field Handbook, which was incorporated by reference. *Id.* at 14-15.

Objecting to the Board’s proposed revision, the Agency stated that the handbook includes numerous chapters, each of which is revised separately. PC 3027 at 15. The Agency added that the handbook addresses a large number of subjects and suggested that the extent to which these numerous provisions apply to permitted facilities is not clear. *See id.* The Agency also claimed that the handbook contains a number of suggestions or examples lacking the clarity of standards and requirement. *Id.* at 15-16.

The Agency concluded that “[t]he Board should require the use of the AWM software . . . in the regulations as proposed by the Agency to clarify the substantive requirements on permittees and to ensure conformity with the federal regulations applicable to these facilities.” PC 3027 at 17. If the Board declined to require use of the AWM software, the Agency recommended that subsection (b) refer to the federal rule instead of the field handbook as follows:

All technical evaluations conducted pursuant to this Subpart H must address the minimum elements contained in this Section. . . .

* * *

- b) the design of the livestock waste storage structure as determined in accordance with 40 C.F.R. § 412.46(a)(1)(ii), incorporated by reference in Section 502.100(a). CAFOs may use equivalent design software or procedures as approved by the Agency. *Id.*

The Agency recommended that, if the Board declined to refer to the federal rule, the Board should “specify which Chapters of the Handbook should be used in determining the design . . . of the open livestock waste storage structure.” *Id.* at 17-18.

Board Discussion

The Agency objected to the Board’s removal of the Animal Waste Management (AWM) software “used to estimate the production of manure, bedding and process water and determine the size of storage facilities.” PC 3027 at 14. The Board notes that the federal CAFO regulations require that a technical evaluation must address the design of a storage structure as determined by the AWM software. *See* 40 C.F.R. §412.46(a)(1)(ii). The Agency stated that, if the Board decides not to require the use of AWM software, it should consider incorporating the federal rules by reference instead of the Handbook.

The Board continues to believe that requiring use of specific software without specifying the underlying model or incorporating it by reference would not be consistent with the APA. The Board notes that the Agency’s proposed Section 502.840(b) required use of “the most recent version” of the AWM software. Section 5-75 of the APA requires that an incorporation by reference “must state that the rule, regulation, standard, or guideline does not include any later amendments or editions.” 5 ILCS 100/5-75(a) (2012).

However, in order to clarify this subsection, the Board will propose to require the design of open livestock waste storage structures in accordance with the federal regulations at 40 C.F.R. § 412.46(a)(1)(ii). The Board will also amend its Board Note to reflect this change. In addition, the Board will amend Section 501.200 to incorporate by reference the federal regulation instead of the Agricultural Waste Management Field Handbook.

The Board makes the following changes to Section 502.840(b) and its Board Note:

- b) The design of the open livestock waste storage structure as determined in accordance with 40 C.F.R. § 412.46(a)(1)(ii)~~the United States Department~~

of Agriculture Natural Resource Conservation Service's Animal Waste Management Field Handbook, incorporated by reference at 35 Ill. Adm. Code 501.200, or equivalent design software or procedures approved by the Agency.

BOARD NOTE: ~~The NRCS's Animal Waste Management (AWM) waste management software specified under 40 C.F.R. § 412.46(a)(1)(ii) is available at <http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/alphabeticall/mnm/?&cid=stclprdb1045812> and includes procedures and calculation based on the Animal Waste Management Field Handbook for design of open livestock waste storage units.~~

Section 502.840(f): Technical Evaluation

Board's First-Notice Proposal

The Board proposed Section 502.840(f) providing that

All technical evaluations conducted pursuant to this Subpart H must address the minimum elements contained in this Section. Waste management and storage facilities designed, constructed, operated, and maintained consistent with the analysis conducted in subsections (a) through (g) of this Section and operated in accordance with the additional measures and records required by Section 502.610 will fulfill the requirements of this Subpart.

* * *

- f) An evaluation of the adequacy of the designed manure storage structure using simulation procedures in the United States Department of Agriculture Natural Resources Conservation Services Agricultural Waste Management Field Handbook, incorporated by reference at 35 Ill. Adm. Code 501.200. Board Opinion at 326, 328.

The proposed subsection (f) also included a Board Note stating that “[t]he adequacy of the designed manure storage structure may be evaluated by using the most recent version of the Soil Plant Air Water (SPAW) Hydrology Tool found at <http://hydrolab.arsusda.gov/SPAW/Index.htm>.” *Id.* at 328.

Agency (PC 3027)

The Agency stated that the Soil Plant Air Water (SPAW) Hydrology Tool software must be used “to determine the adequacy of the manure storage structure.” PC 3027 at 14. The Agency noted that the Board had removed a reference to the software from this subsection and instead required design of waste storage structures according to NRCS's Animal Waste Management Field Handbook, which was incorporated by reference. *Id.* at 14-15.

The Agency argued that “[t]he federal CAFO regulations require permittees to use the SPAW model to conduct the evaluation of the livestock waste storage design developed using

[the] AWM model.” PC 3027 at 16, citing 40 C.F.R. § 412.46(a)(1)(iv). The Agency added that “[t]he handbook has a one-paragraph summary of SPAW, but does not require its use.” PC 3027 at 16. The Agency further argued that the Handbook and SPAW model are substantively different from one another. *Id.* at 16-17.

The Agency concluded that “[t]he Board should require that use of the . . . SPAW model software in the regulations as proposed by the Agency to clarify the substantive requirements on permittees and to ensure conformity with the federal regulations applicable to these facilities.” PC 3027 at 17. The Agency recommended that, if the Board declined to require the use of the SPAW software, subsection (f) refer to the federal rule instead of the field handbook as follows:

All technical evaluations conducted pursuant to this Subpart H must address the minimum elements contained in this Section. . . .

* * *

- f) an evaluation of the adequacy of the designed manure storage structure as required by 40 C.F.R. § 412.46(a)(1)(vi), incorporated by reference in Section 502.100(a). *Id.*

The Agency further recommended that, if the Board declined to refer to the federal rule, the Board should “specify which Chapters of the Handbook should be used in determining . . . the adequacy of the open livestock waste storage structure.” *Id.* at 17-18.

Board Discussion

The Agency objected to the Board’s removal of the Soil-Plant-Air-Water (SPAW) software for determining the adequacy of the manure storage structure. PC 3027 at 14. The Agency emphasized that the federal CAFO regulations specifically require use of the SPAW model to evaluate storage design developed by the AWM model. *Id.* at 16, citing 40 C.F.R § 412.46(a)(1)(vi). The Agency stated that, if the Board decides not to require the use of SPAW software, it should consider incorporating the federal rules by reference instead of the Handbook. PC 3027 at 17.

The Board continues to believe that requiring the use of specific software without specifying the underlying model or incorporating it by reference would not be consistent with the APA. The Board notes that the Agency’s proposed Section 502.840(f) required use of “the most recent version” of the SPAW tool. Section 5-75 of the APA requires that an incorporation by reference “must state that the rule, regulation, standard, or guideline does not include any later amendments or editions.” 5 ILCS 100/5-75(a) (2012).

However, in order to clarify this subsection, the Board will propose to require the design and evaluation of livestock waste storage structures in accordance with the federal regulations at 40 C.F.R. § 412.46(a)(1)(vi). The Board will also amend its Board Note to reflect this change. In addition, the Board will amend Section 501.200 to incorporate by reference the federal regulation instead of the Agricultural Waste Management Field Handbook.

The Board proposes the following amendments to Section 502.840(f) and its Board Note:

- f) An evaluation of the adequacy of the designed manure storage structure in accordance with 40 C.F.R. § 412.46(a)(1)(vi) using simulation procedures in the United States Department of Agriculture Natural Resources Conservation Services Agricultural Waste Management Field Handbook, incorporated by reference at Section 501.200.

BOARD NOTE: ~~The adequacy of the designed manure storage structure may be evaluated by using the most recent version of the~~ Soil Plant Air Water (SPAW) Hydrology Tool specified at 40 C.F.R. § 412.46(a)(1)(vi) is available ~~found~~ at <http://hydrolab.arsusda.gov.SPAW/Index.htm>

Application of Subpart F Technical Standards to Land Application by Unpermitted Large CAFOs

LWVI (PC 3028)

LWVI agreed with the Environmental Groups that “both permitted and unpermitted Large CAFOs should follow the same requirements for equipment inspection.” PC 3028 at 4, citing Board Opinion at 241-43. LWVI posed the question that, “[i]f inspection for equipment leaks is part of what is required for unpermitted CAFOs to claim the agricultural stormwater exemption, why not clearly state that in this section?” PC 3028 at 4. LWVI argued generally that “the Board should place the requirements for unpermitted CAFOs in a single location.” *Id.* LWVI suggested that this would clarify the regulations and simplify compliance. *Id.*

Environmental Groups (PC 3031)

The Environmental Groups noted that in July 2013 USEPA issued a review pertaining to CAFO waste management and disposal and associated risks. PC 3031 at 3, citing PC 3031, Attachment 1 (Literature Review of Contaminants in Livestock and Poultry Manure and Implications for Water Quality). The Groups claimed that this review notes NRCS’s stress on NMPs as a way to fit general land application principles to the variations among facilities. PC 3031, Attachment 1 at 71 (§8.1: Land Application of Manure). They also claimed that USEPA has requested that states develop technical standards to account for these variations. PC 3031 at 3. The Environmental Groups suggested that, because the Board’s proposal does not apply technical standards to all large CAFOs, it does not uniformly apply the best livestock waste management practices to those facilities. *Id.* at 3. The Groups argued that “[t]he proposed two-tiered scheme for Large CAFOs creates an incentive for unpermitted large CAFOs to decline to implement the best practices and to hope that their precipitation-related discharges qualify as agricultural stormwater discharges.” *Id.* at 2-3.

The Environmental Groups renewed their argument that technical standards for land application for permitted CAFOs apply to all Large CAFOs or, alternatively, to all Large CAFOs seeking the agricultural stormwater exemption. PC 3031 at 2, 3. They argued that the Board “should at a minimum extend the technical standards in [Sections] 502.615, 502.620, 502.625, 502.635, 502.640, and 502.645 to Large CAFOs intending to use the agricultural stormwater exemption.” *Id.* at 3.

The Environmental Groups claimed that the first-notice proposal requires unpermitted large CAFOs claiming the agricultural stormwater exemption to comply only with Section 502.510(b). PC 3031 at 3. They argued that, unless these facilities are required to meet technical standards in Subpart F, they will have “wide discretion in deciding how to determine realistic crop yield goals, manure and soil testing methods, and other factors critical to agronomic nutrient application and water quality protection.” *Id.* The Environmental Groups claimed that this discretion burdens operators by requiring them “to demonstrate the chosen methods ensure appropriate agricultural utilization of the nutrients in the waste. . . .” They also argued that it burdens the Agency by requiring it “to verify that agronomic utilization was in fact achieved.” *Id.*

The Environmental Groups argued that Subpart F technical standards “provide the context and information necessary to implement [Section] 502.510(b).” PC 3031 at 3. As one example, the Groups stated that Section “502.510(b) requires ‘protocols’ for testing waste and soil, but does not require the science-based testing methods described in [Section] 502.635.” *Id.* The Groups argued that Section 502.510(b) becomes “nebulous” without the Subpart F technical standards. *Id.* The Environmental Groups claimed that the first-notice proposal does not achieve flexibility “but rather creates loopholes that could lead to inappropriate application of the agricultural stormwater exemption following preventable weather discharges.” *Id.*

Agricultural Coalition Response (PC 3040)

The Agricultural Coalition described the Environmental Groups’ assertion that the Board’s proposal allows unpermitted large CAFOs to avoid proven safeguards for agronomic waste application as “unreasonable and inaccurate.” PC 3040 at 2, citing PC 3031 at 2. The Agricultural Coalition stated that the “technical standards applicable to permitted CAFOs are a result of the actual discharge that is taking place, thus necessitating a permit.” *Id.* The Coalition continued that the rules “require certain steps for compliance from permitted CAFO facilities, and reporting various activities” to the Agency. *Id.* The Coalition claimed that all operations, regardless of permit status and size, “seek to avoid discharges due to the nutrient value needed for crops, the potential for increased regulation, the potential damage to the environment, and other possible results adverse to the interests of the farm.” *Id.* (emphasis in original). The Coalition claimed that the Environmental Groups’ claims “are little more than broad assumptions, and they completely lack evidentiary support.” *Id.*

The Agricultural Coalition noted that the Board “already considered testimony and evidence by the Environmental Groups on this issue” and that the Board “correctly rejected the Environmental Groups argument in the First Notice Opinion and Order.” PC 3040 at 2. The Coalition argued that the Environmental Groups “provide no new or persuasive arguments upon which the Board would be compelled to change direction.” *Id.* at 3.

Board Discussion

The Agency contended that “unpermitted large CAFOs should have flexibility in meeting the requirements of Section 502.102 and 502.510(b) to claim the agricultural stormwater

exemption.” PC 3041 at 2. The Board agrees, and declines to impose additional requirements on unpermitted Large CAFOs. *See* Board Opinion at 171.

The Board at first notice held that “proposed Section 502.510(b) appropriately implements the federal CAFO rule as to requirements for unpermitted Large CAFOs.” Board Opinion at 171. The Board appreciates LWVI’s and the Environmental Groups’ concerns raised on this matter; however, neither points to evidence in the record suggesting that the Board’s previous finding is incorrect. The Board therefore declines to adopt additional requirements as suggested by LWVI and the Environmental Groups.

Public Act 94-484: Permit Exemption for On-Farm Landscape Waste Composting

Agency (PC 3027)

The Agency noted that the Board requested comment on whether Public Act 94-484, effective August 16, 2003 (P.A. 94-484), necessitated revision of the Board’s first-notice proposal. PC 3027 at 18, *see* Board Opinion at 256. P.A. 94-484 amended Section 21(q)(3) of the Act (415 ILCS 5/21(q)(3) (2012)), which exempts from permitting on-farm landscape waste composting facilities meeting specified criteria. P.A. 94-484 added as Section (A-1) a criterion providing that

the composting facility accepts from other agricultural operations for composting with landscape waste no materials other than uncontaminated and source-separated (i) crop residue and other agricultural plant residue generated from the production and harvesting of crops and other customary farm practices, including, but not limited to, stalks, leaves, seed pods, husks, bagasse, and roots and (ii) plant-derived animal bedding, such as straw or sawdust, that is free of manure and was not made from painted or treated wood. P.A. 98-484.

The Agency noted that, while the federal rules, LMFA, and Board’s proposal define “manure” broadly to include other commingled materials, the Act does not define the term. PC 3027 at 18, 19. The Agency argued that the General Assembly intended only the narrower common meaning of “manure” to apply in Section 21(q)(3) of the Act. *Id.* at 19. The Agency further argued that application of the Board’s proposed definition to Section 21(q)(3)(A-1) would lead to absurd results and conflict with legislative intent. *Id.* The Agency claimed that the Board’s proposed definitions do not affect undefined terms in the Act. *Id.* The Agency concluded that P.A. 94-484 does not necessitate revision of the Board’s proposed definitions or other changes to the Board’s proposal. *Id.* at 18, 19.

Agricultural Coalition (PC 3030)

The Agricultural Coalition also noted that the Board requested comment on whether Public Act 94-484, effective August 16, 2003 (P.A. 94-484), necessitated revision of the Board’s first-notice proposal. PC 3030 at 37, *see* Board Opinion at 256. The Coalition stated that it interpreted P.A. 94-484 to apply “only to landscape waste composting, which is not a subject of this rulemaking.” PC 3030 at 37. The Coalition also stated that P.A. 94-484 “applies only to

bedding that is free of manure.” *Id.* Arguing that this bedding “would not fall within the definitions of ‘livestock waste’ or ‘manure’” proposed by the Board, the Coalition stated that it did “not believe further amendment is necessary to the proposed rule to accommodate Public Act 94-484.” *Id.*

Board Discussion

The Board appreciates the Agency’s and Agricultural Coalition’s response to the Board’s request for comment on Public Act 94-484. The Board agrees that this statutory amendment addressing on-farm landscape waste composting facilities does not necessitate any amendment of the Board’s first-notice proposal.

Livestock Waste Storage Capacity

LWVI (PC 3028)

LWVI noted that existing Section 501.404(c)(4)(B) provides that “[n]ew livestock waste handling facilities which handle the waste in a liquid form shall provide a minimum of 120-day storage with a liquid manure-holding tank, lagoon, holding pond, or any combination thereof. . . .” 35 Ill. Adm. Code 501.404(c)(4)(B); *see* PC 3028 at 3.

LWVI also noted that the Board’s proposed Section 502.610(l) provides that livestock waste storage structures at CAFOs subject to this section must have a volume equal to or greater than the waste, runoff, and wash down liquid generated during a 180-day period. *See* Board Opinion at 306-07; PC 3028 at 3.

LWVI further noted that the Board’s proposed Section 502.630(a)(1)(C) addressing surface application of livestock waste requires the owner or operator to provide 120 days of available capacity for manure storage. *See* Board Opinion at 315-16; PC 3028 at 3.

Suggesting that these different requirements may generate confusion, LWVI asked why the Board’s proposed regulations did not consistently require a minimum storage capacity of 180 or even 270 days. PC 3028 at 3.

Board Discussion

The LWVI cites existing Section 501.404(c)(4)(B), which provides in part that new facilities handling liquid livestock waste must generally provide a minimum of 120 days of storage volume. 35 Ill. Adm. Code 501.404(c)(4)(B). The Board’s proposed Section 501.103(a) provides in pertinent part that Subpart C, which includes Section 501.404, “contains the requirements applicable to all Livestock Waste Handling Facilities and Livestock Management Facilities whether or not those facilities are defined as Animal Feeding Operations (AFOs) or Concentrated Animal Feeding Operations (CAFOs) and without regard to whether the facility is subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements.” Board Opinion at 260.

The LWVI also cites proposed Section 502.610(l), which requires CAFOs subject to Subpart F to have a storage volume at least as great as “the amount of waste generated during a 180-day period of operation at design capacity.” Board Opinion at 305-06.

Finally, the LWVI cites proposed Section 502.630(a)(1)(C), which states that surface land application of livestock waste on frozen, snow-covered, or ice-covered ground is prohibited unless the application meets specified conditions. Board Opinion at 315. One of those conditions requires the owner or operator to have taken steps prior to December 1 to provide 120 days of available storage. *Id.* In its first-notice opinion and order, the Board noted that Section 502.510(b) applies the requirements of Section 502.630 to unpermitted Large CAFOs seeking to claim the agricultural stormwater exemption. *Id.* at 91 (citing Agency testimony by Mr. Dan Heacock).

The Board appreciates LWVI’s stated interest in clear and consistent regulations. While these provisions apply differently to various facilities as summarized above, the Board does not believe that these requirements are inconsistent with one another. The Board also does not believe that these requirements are unclear or that regulated entities will have undue difficulty applying them. Accordingly, the Board declines to amend any of these provisions.

Applicable Waters

The Board is aware that on March 25, 2014, USEPA released a prepublication version of proposed federal regulations concerning the definition of “waters of the United States” and the scope of waters protected under the Clean Water Act. At first notice, the Board proposed to repeal the definition of “navigable waters” in Section 501.325 and used the phrase “waters of the United States” throughout Part 502. In that opinion, the Board provided background on the use of these terms and analyzed the meaning of the terms. The Board finds that USEPA’s actions do not warrant any change in the Board’s approach at this time.

ECONOMIC REASONABLENESS AND TECHNICAL FEASIBILITY OF BOARD’S SECOND-NOTICE PROPOSAL

Statutory Background

Section 27(a) of the Act directs the Board to take into account factors including the “technical feasibility and economic reasonableness of measuring or reducing the particular type of pollution” when conducting a substantive rulemaking. 415 ILCS 5/27(a) (2012). Section 27(b) of the Act provides that, in adopting rules, the Board shall determine “based upon the evidence in the public hearing record, including but not limited to the economic impact study, as to whether the proposed rule has any adverse economic impact on the people of the State of Illinois.” 415 ILCS 5/27(b) (2012). For the reasons below and as it did in adopting its first-notice proposal, the Board finds that the amendments proposed today are technically feasible and economically reasonable and will not have an adverse economic impact on citizens of Illinois. *See* 415 ILCS 5/27(a), (b) (2012).

Request for Economic Impact Study

As required by Section 27(b) of the Act (415 ILCS 5/27(b) (2012)) the Board in a letter dated March 22, 2012, requested that DCEO conduct an economic impact study of the Agency's rulemaking proposal. The Board asked that DCEO determine by May 1, 2012, whether it would conduct such a study. The Board has received no response to this request from DCEO.

During each of the five hearings held in this proceeding, the hearing officer afforded those present an opportunity to address the Board's request for a study and DCEO's lack of response. Tr.1 at 200-01; Tr.2 at 40-41; Tr.3 at 169-70; Tr.4 at 266-67; Tr.5 at 212-13. No participant offered testimony or comment on the request or response. *See* Tr.1 at 201; Tr.2 at 41; Tr.3 at 170; Tr.4 at 267; Tr.5 at 213.

Potentially Affected Entities

The Agency stated that its proposal generally intends to cover permitted CAFOs. SR at 90. The Agency noted, however, that some elements of its proposal "impact all CAFOs meeting the definition of a large CAFO." *Id.* The Agency added that proposed amendments to Part 501 apply "to all livestock management facilities and livestock waste handling facilities regardless of whether they are a CAFO or whether they have a permit from Illinois EPA." *Id.* The Agency characterized its proposed amendments to Part 501 as "primarily non-substantive, clean-up amendments to create consistency between Parts 501, 502, and the Act." *Id.*

The Agency's Statement of Reasons claimed that "[i]t is difficult to give an accurate number of CAFOs in Illinois" and that there is no comprehensive inventory of CAFOs in the state. SR at 90. After the 2003 adoption of federal rules, "the Agency estimated that Illinois may have had approximately 500 large CAFOs and 2,700 medium CAFOs." *Id.* The Agency argued that, following the Waterkeeper and Pork Producers decisions, "it is impossible to specify how many of these would now be required to obtain an NPDES permit because a site-specific evaluation is required to determine whether the CAFO is discharging." *Id.* During the hearing process, the Agency provided testimony estimating that there are approximately 350 to 400 Large CAFOs in Illinois. The Agency added that it had issued the general CAFO permit on October 20, 2009. SR at 90. The Agency indicated that, on the March 1, 2012, date of filing its proposal, "Illinois had approximately 35 CAFOs covered by the General Permit or proposed to be covered by that permit." *Id.*

Board Discussion

Technical Feasibility

In its first-notice opinion, the Board reviewed the record regarding the issue of technical feasibility. *See* Board Opinion at 247-49. The Board noted the Agency's claim "that both the land application area and production area requirements of the proposed rule are technically feasible and rely on widely available existing equipment, methods and practices." *Id.* at 254, citing SR at 89. The Board stated that the record did not include persuasive evidence or arguments challenging the Agency's claim. Board Opinion at 254. The Board concluded that, to

the extent it had amended the Agency's original proposal, it has not imposed additional technical requirements. *Id.* The Board found that its first-notice proposal is technically feasible. *Id.*

The first-notice comments have not squarely addressed technical feasibility, and the record does not include any persuasive claim that the first-notice proposal is technically infeasible. To the extent that the Board has modified its first-notice proposal, it has done so without adding technical requirements or making them more stringent. On the basis of the record before it and for the reasons discussed above, the Board finds that its second-notice proposal is technically feasible.

Economic Reasonableness

In its first-notice opinion, the Board reviewed the record regarding the issue of economic reasonableness. *See* Board Opinion at 249-53. The Board noted the Agency's argument that it was difficult to estimate the economic impact of the original proposal because regulated facilities have considerable flexibility in complying. *Id.* at 254. The Board also noted the Agency's claim that many of its proposed requirements were implemented under the LMFA, the CAFO general permit, or USDA conservation programs. *Id.* Although the Agency acknowledged that some facilities may bear costs such as building additional waste storage capacity or locating additional fields for land application, it claimed that the economic impact of those costs will be reasonable when compared to the benefits. *Id.*

The record also included estimates that its proposed 2003 regulations would have average annual costs of \$26,912 for Large CAFOs and \$8,783 for Medium CAFOs, with lower costs for swine CAFOs. Board Opinion at 254. For swine CAFOs, USEPA estimated lower costs. *Id.* USEPA also estimated that the rules would yield \$204-355 million of economic benefit through pollution reductions attributable to Large CAFOs. *Id.*

The Agency noted USEPA's determination that the only change in costs from the 2003 rule to the 2008 rule was a small decrease in administrative costs. Board Opinion at 254. The Board recognized the Agency's claim that, while USEPA did not analyze the economic impact of the Pork Producers decision, it expects further decreases in administrative costs. The Agency argued that fewer CAFOs will be required to apply for a permit than under the proposed 2003 or 2008 rules. *Id.* at 254-55. The Agency also claimed that USEPA did not find a change in the economic benefit between the 2003 rule and the 2008 rule. *Id.* at 255.

The Board's first-notice opinion stated that none of the participants had persuasively challenged USEPA's economic analysis of its proposed 2003 rules or application of it to the Agency's proposal. Board Opinion at 255. The Agency claimed that the Waterkeeper decision had been expected to reduce the number of CAFOs seeking a permit and that the Pork Producers decision would also reduce facilities' administrative expenses. The Agency cited its own experience to claim that fewer CAFOs will apply for a permit than assumed by USEPA's previous analyses. *Id.* The Board agreed with the Agency, in light of the USEPA analyses, that the original proposal implements the federal requirements in a manner that is economically reasonable. The Board concluded that, to the extent it proposed limited amendments to that proposal, those did not impose unreasonable economic burdens. *Id.* For example, while the

Board modified Section 501.505 to require submission of information by specified CAFOs, that requirement is expected to generate little expense. *Id.* The Board found that its first-notice proposal is economically reasonable. *Id.*

The first-notice comments have not squarely addressed economic reasonableness, and the record does not include any persuasive claim that the first-notice proposal is technically infeasible. To the extent that the Board has modified its first-notice proposal, it has done so without adding economic costs or making them more burdensome. On the basis of the record before it and for the reasons discussed above, the Board finds that its second-notice proposal is economically reasonable.

CONCLUSION

The Board proposes for second-notice review by JCAR the following amendments to its agriculture related pollution regulations in Parts 501, 502 and 504 (35 Ill. Adm. Code 501, 502, 504). The Board includes in these amendments non-substantive changes suggested by JCAR except for changes to Sections 502.500, 502.515(d)(3) and 502.515(e)(3)(B) discussed above in the section-by-section analysis of the proposal.

ORDER

The Board directs the Clerk to submit the following proposed amendments to Parts 501, 502, and 504 of the Board's agriculture related pollution regulations to JCAR for second-notice review. Proposed additions to Parts 501, 502, and 504 are underlined, and proposed deletions appear stricken.

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE E: AGRICULTURE RELATED POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 501
GENERAL PROVISIONS

SUBPART A: AUTHORITY AND POLICY

Section	
501.101	Authority
501.102	Policy
<u>501.103</u>	<u>Organization of this Chapter</u>
<u>501.104</u>	<u>Severability</u>

SUBPART B: DEFINITIONS AND INCORPORATIONS

Section

501.200	Incorporations by Reference
501.201	Definitions
501.205	Act
501.210	Administrator
501.215	Air Pollution
501.220	Agency
<u>501.223</u>	<u>Animal Confinement Area</u>
501.225 501.225	Animal Feeding Operations Animal Feeding Operation
225	
501.230	Animal Unit
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<u>501.236</u>	<u>Chemicals and Other Contaminants</u>
<u>501.238</u>	<u>Concentrated Animal Feeding Operation (CAFO)</u>
501.240	Construction
501.241	CWA
<u>501.242</u>	<u>Dry Lot</u>
<u>501.244</u>	<u>Erosion Factor T</u>
501.245	Existing Livestock Management Facility and Livestock Waste-Handling Facility
501.246	Expansion
501.248	Farm Residence
501.250	Feedlot Runoff
<u>501.252</u>	<u>Frozen Ground</u>
<u>501.253</u>	<u>Grassed Waterway</u>
<u>501.254</u>	<u>Groundwater</u>
501.255 501.255	Holding Pond Holding Pond
255	
501.260	Impermeable
<u>501.261</u>	<u>Incorporation</u>
<u>501.263</u>	<u>Injection</u>
501.265	Lagoon
<u>501.267</u>	<u>Land Application Area</u>
501.270	Leachate
501.274	Liquid Livestock Waste
501.275	Liquid Manure-Holding Tank
501.280	Livestock
501.285	Livestock Management Facility
501.290	Livestock Shelter
501.295	Livestock Waste
501.300	Livestock Waste-Handling Facility
501.305	Man-made
501.310	Man-made Ditch
<u>501.312</u>	<u>Manure</u>
<u>501.313</u>	<u>Manure Storage Area</u>
501.315	Manure Storage Structure
501.317	Maximum Feasible Location

501.320	Modification
501.325	Navigable Waters (<u>Repealed</u>)
501.330	New Livestock Management Facility and New Livestock Waste-Handling Facility
<u>501.333</u>	<u>New Source</u>
501.335	NPDES
501.340	NPDES Permit
501.342	Non-farm Residence
<u>501.343</u>	<u>Overflow</u>
501.345	Owner /or Operator
501.350	Person
501.355	Pollutant
501.356	Populated Area
<u>501.357</u>	<u>Process Wastewater</u>
<u>501.358</u>	<u>Production Area</u>
<u>501.359</u>	<u>Raw Materials Storage Area</u>
501.360	<u>Revised Universal Soil Loss Equation</u> Settling Basin
<u>501.361</u>	<u>Saturated</u>
<u>501.363</u>	<u>Setbacks</u>
501.365	Silvicultural Point Source Settling Basin
501.370	Standard of Performance
501.372	Supernatant
<u>501.373</u>	<u>Surface Land Application</u>
501.375	Temporary Manure Stack
<u>501.377</u>	<u>Vegetative Buffer</u>
<u>501.378</u>	<u>Vegetative Fence Row</u>
<u>501.379</u>	<u>Waste Containment Area</u>
501.380	Water Pollution
<u>501.385</u>	<u>Wet Lot</u>
<u>501.390</u>	<u>25-Year, 24-Hour Precipitation Event</u>
<u>501.395</u>	<u>100-Year, 24-Hour Precipitation Event</u>

SUBPART C: OPERATIONAL RULES FOR ALL LIVESTOCK MANAGEMENT FACILITIES AND LIVESTOCK WASTE-HANDLING FACILITIES

Section	
501.401	<u>Purpose and Scope of Operational Rules for Livestock Management Facilities and Livestock Waste-Handling Facilities</u> General Criteria
501.402	Location of New Livestock Management Facilities and New Livestock Waste-Handling Facilities
501.403	Protection of Livestock Management Facilities and Livestock Waste-Handling Facilities
501.404	Handling and Storage of Livestock Waste
501.405	Field Application of Livestock Waste
501.406	Inspections and Disease Prevention

SUBPART D: SUBMITTAL OF INFORMATION

Section

501.505 Requirements for Certain CAFOs to Submit Information

501.APPENDIX A References to Previous Rules

AUTHORITY: Implementing and authorized by Sections 9, 12, 13, 21, 22 and 27 of the Environmental Protection Act [415 ILCS 5/9, 12, 13, 21, 22 and 27].

SOURCE: Filed and effective January 1, 1978; amended at 2 Ill. Reg. 44, p. 137, effective October 30, 1978; codified at 7 Ill. Reg. 10592; amended in R90-7 at 15 Ill. Reg. 10075, effective July 1, 1991; amended in R12-23 at 38 Ill. Reg. _____, effective _____.

SUBPART A: AUTHORITY AND POLICY

Section 501.103 Organization of this Chapter

The Board regulations adopted in 35 Illinois Administrative Code Subtitle E: Agriculture Related Pollution, Chapter I: Pollution Control Board are organized as provided in this Section.

- a) Part 501 of this Chapter contains definitions and incorporations by reference applicable to Parts 501, 502 and 503, which are the Parts of this Chapter administered by the Environmental Protection Agency. Subpart C of Part 501 also contains the requirements applicable to all livestock waste-handling facilities and livestock management facilities, whether or not those facilities are defined as ~~animal~~ Animal ~~feeding~~ Feeding ~~operations~~ Operations (AFOs) or ~~concentrated~~ Concentrated ~~animal~~ Animal ~~feeding~~ Feeding ~~operations~~ Operations (CAFOs) and without regard to whether the facility is subject to National Pollutant Discharge Elimination System (NPDES) permitting requirements.
- b) Part 502 identifies which AFOs are subject to NPDES permit requirements and specifies those requirements. Part 502 also provides the State technical standards applicable to permitted CAFOs. That Part also contains requirements applicable to land application activities from AFOs that are defined as large CAFOs and are not permitted under an NPDES permit.
- c) Part 503 contains the requirements applicable to fish and aquatic animal production facilities, irrigation activities, and silvicultural activities and sources.
- d) Part 506 implements the Livestock Management Facilities Act [510 ILCS 77]. Those rules and the Livestock Management Facilities Act are administered by the Illinois Department of Agriculture.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.104 Severability

If any provision of this Part is adjudged invalid, or if the application of this Part to any person or in any circumstance is adjudged invalid, that invalidity shall not affect the validity of this Chapter as a whole, or of any Part, Subpart, sentence or clause of this Part not adjudged invalid.

(Source: Added at 38 Ill. Reg. _____, effective _____)

SUBPART B: DEFINITIONS AND INCORPORATIONS

Section 501.200 Incorporations by Reference

- a) The Board incorporates the following material by reference:

~~ASABE/ASAE. Available from American Society of Agricultural and Biological Engineers, 2950 Niles Road, St. Joseph, MI 49085 (269) 429-0300, fax (269) 429-3852, hq@asabe.org 9659 (616) 429-6300.~~

~~“Management Control of Manure Odors,” ASAE EP379.4/EP379.1 (January 2007)/(December 1986).~~

~~“Design of Anaerobic Lagoons for Animal Waste Management,” ASABE EP403.4 (R2011)/ASAE EP403.1 (March 1999).~~

“Illinois Agronomy Handbook, 24th Edition,” University of Illinois, College of Agriculture, Consumer and Environmental Sciences. Urbana, IL, July 2009. Available from University of Illinois, Office of Extension and Outreach, 111 Mumford Hall (MC-710), 1301 W. Gregory Dr., Urbana, IL 61801 (217) 333-5900.

MWPS. Available from MidWest Plan Service, 122 Davidson Hall, Iowa State University, Ames, IA 50011-3080 (515)294-4337.

“Livestock Waste Facilities Handbook, Third Edition,” MWPS-18. MidWest Plan Service. April 1993.

“Manure Characteristics,” Section 1. Second Edition MWPS-18-S1. MidWest Plan Service. 2004.

“Recommended Chemical Soil Test Procedures for the North Central Region,” North Central Regional Publication No.221, Missouri Agricultural Experiment Station Bulletin SB 1001 (January 1998). Available from North Central Region-University of Missouri Soil Testing Lab, 23 Mumford Hall, University of Missouri Columbia, MO 65211 (573) 884-4288.

“Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils; Bulletin No. 810,” University of Illinois, College of Agricultural, Consumer and Environmental Sciences, Office of Research (2000), revised January 15, 2011 to amend Table 2 for B810. Available from University of Illinois, College of Agricultural, Consumer, and Environmental Sciences, Office of Research, 228 Mumford Hall, 1301 W. Gregory Dr., Urbana IL 61801 (217) 333-0240.

“Optimum Crop Productivity Ratings for Illinois Soils; Bulletin 811,” University of Illinois, College of Agricultural, Consumer and Environmental Sciences, Office of Research (2000), revised January 15, 2011 to amend Table S2 for B811. Available from University of Illinois, College of Agricultural, Consumer, and Environmental Sciences, Office of Research, 228 Mumford Hall, 1301 W. Gregory Dr., Urbana IL 61801 (217) 333-0240.

“NOAA Atlas 14: Precipitation Frequency Atlas of the United States,” United States Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Volume 2, Version 3.0 (2004), revised 2006. Available from NOAA, NWS, Office of Hydrologic Development, 1325 East West Highway, Silver Spring MD 20910 (Available online at http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume2.pdf).

Code of Federal Regulations. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20401 (202) 783-3238:

~~7 CFR 610.12 (2013), Revised Universal Soil Loss Equation.~~

40 CFR 412.46(a)(1)(ii) (2008), New Source Performance Standards (NSPS).

40 CFR 412.46(a)(1)(vi) (2008), New Source Performance Standard (NSPS).

“Agricultural Waste Management Field Handbook,” United States Department of Agriculture, Natural Resources Conservation Service (2009). Available from USDA, NRCS, 1400 Independence Ave., S.W., Washington, DC 20250. (Available online at <http://directives.sc.egov.usda.gov/viewerFS.aspx?hid=21430>).

- b) This Section incorporates no later editions or amendments.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.201 Definitions

- a) Except as ~~otherwise hereinafter~~ stated in this Part, and unless a different meaning of the term is clear from its context, the definitions of terms used in this Chapter shall be the same as those used in the Act and 35 Ill. Adm. Code: Subtitle C, Chapter I.
- b) The definitions contained in this Subpart are applicable to 35 Ill. Adm. Code 501, 502 and 503.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.223 Animal Confinement Area

Animal confinement area includes, but is not limited to, open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways and stables.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.236 Chemicals and Other Contaminants

Antibiotics, hormones, feed additives, pesticides, hazardous and toxic chemicals, petroleum products and by-products, other chemical products and by-products, and the residues and containers of any of these materials.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.238 Concentrated Animal Feeding Operation (CAFO)

~~An animal Animal feeding Feeding operation Operation~~ (AFO) that is defined as a ~~Large~~ large CAFO pursuant to 35 Ill. Adm. Code 502.103 or as a medium CAFO pursuant to 35 Ill. Adm. Code 502.104, or that is designated as a CAFO pursuant to 35 Ill. Adm. Code 502.106.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.241 CWA

The Clean Water Act, as amended (33 USC 1251 et seq.)~~Federal Water Pollution Control Act~~ (also known as the Clean Water Act), as amended, 33 U.S.C 1251 et seq., Public Law 92-500, enacted by the Congress October 18, 1972, as amended by Public Law 95-217, enacted December 27, 1977, as amended.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.242 Dry lot

A facility for growing ducks in confinement with a dry litter floor cover and no access to swimming areas.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.244 Erosion Factor T

An estimate of the maximum average annual rate, in tons per acre per year, of soil erosion by wind or water that can occur without affecting crop productivity over a sustained period.

BOARD NOTE: Erosion Factor T for Illinois soils is available from the United States Department of Agriculture, Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign, IL 61821, Phone (217) 353-6676. ~~Service's~~ The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov> ~~at~~ http://soils.usda.gov/survey/printed_surveys/state.asp?state=Illinois&abbr=IL.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.252 Frozen Ground

Soil that is frozen anywhere between the first ½ inch to 8 inches of soil as measured from the ground surface.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.253 Grassed Waterway

A natural or constructed waterway or outlet shaped or graded and established in suitable vegetation as needed for the conveyance of runoff from a field, diversion or other structure.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.254 Groundwater

Underground water which occurs within the saturated zone and geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure [415 ILCS 5/3.210].

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.261 Incorporation

A method of land application of livestock waste in which the livestock waste is thoroughly mixed or completely covered with the soil within 24 hours. Any ponded liquid livestock waste remaining on the site after application is not considered to be thoroughly mixed or completely covered with the soil.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.263 Injection

The placement of livestock waste 4 to 12 inches below the soil surface in the crop root zone using equipment specifically designed for that purpose, when the applied material is retained by the soil.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.267 Land Application Area

Land under the control of an ~~animal~~ Animal feeding Feeding operation ~~Operation~~ owner or operator, whether it is owned, rented or leased, to which livestock waste from the production area is or may be applied.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.295 Livestock Waste

Manure, litter, process wastewater, overflow from watering systems, ~~Livestock excreta and associated feed losses, bedding,~~ wash waters, sprinkling waters from livestock cooling, precipitation polluted by falling on or flowing onto an ~~animal~~ Animal feeding Feeding operation ~~Operation~~ and other materials polluted by livestock, including but not limited to soils and sludges removed from livestock waste storage structures. Livestock waste does not include agricultural stormwater discharge.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.305 Man-made

~~Constructed by man and used for the purpose of transporting waste.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.310 Man-made Ditch

~~A discrete fissure or channel excavated in the earth for the purpose of transporting livestock waste directly to navigable waters. This is not to be confused with a vegetative filter or acceptable disposal area which is a treatment device and may take the form of a man-made terrace or grass waterway system.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.312 Manure

Animal excreta, bedding, compost and raw materials or other materials commingled with manure or set aside for disposal.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.313 Manure Storage Area

Includes but is not limited to lagoons, runoff ponds, storage sheds, stockpiles, under the house or pit storages, liquid impoundments, static piles, and composting piles.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.325 Navigable Waters (Repealed)

All waters of the United States as defined in Criteria and Standards for the National Pollutant Discharge Elimination System (40 CFR 125.1(p)):

- a) ~~All navigable waters of the United States;~~
- b) ~~Tributaries of navigable water of the United States;~~
- e) ~~Interstate waters;~~
- d) ~~Intrastate lakes, rivers and streams which are utilized by interstate travelers for recreational or other purposes;~~
- e) ~~Intrastate lakes, rivers and streams from which fish or shellfish are taken and sold in interstate commerce; and~~
- f) ~~Intrastate lakes, rivers and streams which are utilized for industrial purposes by industries in interstate commerce.~~

(Source: Repealed at 38 Ill. Reg. _____, effective _____)

Section 501.333 New Source

Any building, structure, facility, or installation from which there is or may be a discharge of pollutants, the construction of which commenced after either of the following dates:

- a) after promulgation of standards of performance under section 306 of the Clean Water Act that are applicable to the source, or
- b) after proposal of standards of performance in accordance with section 306 of the Clean Water Act that are applicable to the source, but only if the standards are promulgated in accordance with section 306 within 120 days after their proposal.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.343 Overflow

The discharge of livestock waste resulting from the filling of livestock waste storage structures beyond the point at which livestock waste or stormwater can no longer be contained by the structure.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.345 Owner ~~/or~~ Operator

Any person who owns, leases, operates, controls or supervises a livestock management facility or livestock waste-handling facility.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.355 Pollutant

Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water, as defined in CWA.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.357 Process Wastewater

Water directly or indirectly used in the operation of the ~~AFQ~~ Animal Feeding Operation for any of the following activities: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing pens, barns, manure pits, or other ~~AFQ~~ Animal Feeding Operation facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. It also includes any water that comes into contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs or bedding.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.358 Production Area

The part of an ~~AFQ~~ Animal Feeding Operation that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. Also included in the definition of production area is any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.359 Raw Materials Storage Area

Includes, but is not limited to, feed silos, silage bunkers, and bedding materials stacks.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.360 Revised Universal Soil Loss Equation Version 2 (RUSLE2) ~~Settling Basin~~

The equation for calculating soil loss due to water erosion is as follows as set forth in 7 CFR 610.12 (2013), incorporated by reference in Section 501.200:

$$\underline{A = R * K * LS * C * P}$$

$$\underline{a_i = r_i k_i l_i S c_i p_i}$$

Where

a_i = long-term average soils loss for the ith day;

r_i = erosivity factor;

k_i = soil erodibility factor;

l_i = soil length factor;

S = soil steepness factor;

c_i = cover management factor; and

p_i = supporting practices factor,

all on the ith day, except for slop steepness factor (S).

The average annual soil loss is computed as follows:

$$\underline{A = \left[\sum_{i=a}^{365m} a_i \right] / m}$$

Where:

A = average annual soil loss

$365m$ = number of days per year.

m = number of years in the analysis period. The value for m is 1 for continuous vegetation on range, pasture, and other lands, where conditions are the same year after year, while m = the number of years of cropping management rotations on cropland and the number of years following a

disturbance such as construction, logging, grading of a reclaimed surface mine, or closing of a land fill where conditions are changing years to year.

- ~~A = the estimation of average annual soil loss in tons per acre caused by sheet and rill erosion;~~
- ~~R = the rainfall erosivity factor, which accounts for the energy and intensity of rainstorms;~~
- ~~K = the soil erodibility factor, which measures the susceptibility of a soil to erode under a standard condition and adjusts it bi-monthly for the effects of freezing and thawing, and soil moisture;~~
- ~~LS = the slope length and steepness factor, which accounts for the effect of length and steepness of slope on erosion based on the relationship of rill to interrill erosion; and~~
- ~~P = the support practice factor, which accounts for the effect of conservation support practices, such as cross slope farming, strip cropping, buffer strips, and terraces on soil erosion.~~

BOARD NOTE: Soil loss may be calculated using Revised Universal Soil Loss Equation 2 (RUSLE2) software program available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm. Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Services, 1400 Independence Avenue, S.W., Washington, DC 20250 (202) 720-3656.

~~Any excavated, diked or walled structure or combination of structures designed as part of a livestock waste handling facility to detain feedlot runoff for a sufficient time to permit solids to settle for later removal.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.361 Saturated

Soils in which pore spaces are occupied by liquid to the extent that additional inputs of water or liquid wastes cannot infiltrate into the soil.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.363 Setbacks

A specified distance from surface waters or potential conduits to surface waters where livestock waste may not be land applied. Examples of conduits to surface waters include, but are not limited to, open tile intake structures, sinkholes, and agriculture well heads.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.373 Surface Land Application

Application of livestock waste to the ground surface that is not incorporated or injected.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.377 Vegetative Buffer

Narrow, permanent strip of dense perennial vegetation established parallel to the contours of the land 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 surface waters.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.378 Vegetative Fence Row

Narrow, permanent strip of perennial vegetation established at the edge of a field that is a minimum of 15 feet wide. The vegetative fence row slows water runoff and enhances water infiltration, reducing the risk of pollutants leaving the field.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.379 Waste Containment Area

Includes, but is not limited to, settling basins, and areas within berms and diversions that separate uncontaminated stormwater from livestock waste.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.385 Wet Lot

A confinement facility for raising ducks that is open to the environment, has a small number of sheltered areas, and has open water runs and swimming areas to which ducks have free access.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.390 25-Year, 24-Hour Precipitation Event

The maximum 24-hour precipitation event with a probable recurrence interval of once in 25 years, as defined by NOAA Atlas 14; Precipitation Frequency Atlas of the United States, incorporated by reference in Section 501.200.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 501.395 100-Year, 24-Hour Precipitation Event

The maximum 24-hour precipitation event with a probable recurrence interval of once in 100 years, as defined by NOAA Atlas 14; Precipitation Frequency Atlas of the United States, incorporated by reference in Section 501.200.

(Source: Added at 38 Ill. Reg. _____, effective _____)

SUBPART C: OPERATIONAL RULES FOR ALL LIVESTOCK MANAGEMENT FACILITIES AND LIVESTOCK WASTE-HANDLING FACILITIES

Section 501.401 Purpose and Scope of Operational Rules for Livestock Management Facilities and Livestock Waste-Handling Facilities~~General Criteria~~

- a) Besides the regulations contained within this Chapter, every person shall also comply with provisions of the Act and other Board regulations.
- b) The owner or operator of any livestock management facility or livestock waste-handling facility shall comply with the CWA, NPDES filing requirements and the feedlot category of point source effluent guidelines. All livestock management facilities and livestock waste-handling facilities have the obligation to make a site specific determination of whether the facility is subject to NPDES permit requirements and to follow those requirements when and where they are applicable. CAFOs are subject to additional requirements applicable under 35 Ill. Adm. Code 502.
- c) ~~This Subpart~~These regulations shall apply to stockyards and similar operations where animals are held briefly, as well as to conventional livestock operations.
- d) The transportation of livestock wastes shall be planned and conducted so as not to cause, threaten, or allow any violation of the Act and applicable regulations.
- e) Any runoff or overflow from a livestock management facility or a livestock waste handling facility shall not cause a water quality violation pursuant to the Act or 35 Ill. Adm. Code Subtitle C: Water Pollution.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.402 Location of New Livestock Management Facilities and New Livestock Waste-Handling Facilities

- a) No new livestock management facility or new livestock waste-handling facility shall contain within its boundaries any stream or other surface waters except small temporary accumulations of water occurring as a direct result of precipitation.

- b) New livestock management facilities and new livestock waste-handling facilities located within a 10-year flood height as recorded by the United States Geological Survey or as officially estimated by the Illinois State Water Survey shall be protected against such flood.
- c) Limitations Effective July 15, 1991
- 1) Upon July 15, 1991, new or expanded livestock management facilities and new or expanded livestock waste-handling facilities shall not be located within ½ mile of a populated area or within ¼ mile of a non-farm residence.
 - 2) For purposes of this subsection (c), the following shall not be considered location of a new or expanded livestock management or waste-handling facility:
 - A) Commencement of operations at an idle facility which has livestock shelters left intact, and ~~that~~which has been operated as a livestock management facility or livestock waste-handling facility for four consecutive months at any time within the ~~ten~~(10) previous years;
 - B) Commencement of operations at a facility reconstructed after partial or total destruction due to natural causes, i.e., tornado, fire, or earthquake.
 - 3) Adequate odor control methods and technology shall be practiced by operators of new and existing livestock management facilities and livestock waste-handling facilities so as not to cause air pollution.
- d) The setback requirements of subsection (c) shall not apply to any livestock management facility or livestock waste-handling facility ~~that~~which meets any of the following conditions:
- 1) The facility is located in an ~~agricultural area~~Agricultural Area, designated as such pursuant to the Agricultural Areas Conservation and Protection Act, [505 ILCS 5]Ill. Rev. Stat. 1989, ch. 5, para. 1001 et seq.;
 - 2) The facility undergoes expansion, and the owner of the facility certifies and notifies the Agency in writing ~~as such~~ that the facility was operating as a livestock management facility or livestock waste-handling facility for at least one year prior to the existence of any non-farm residence within ¼ mile of the facility or of a populated area within ½ mile of the facility; or

- 3) The use of the facility as a livestock management or livestock waste handling facility is allowed by local zoning or municipal ordinance. If no local zoning or municipal ordinance exists that covers ~~that~~^{such} use, the facility shall be exempt if the livestock are not raised or kept at the facility primarily for hire or the raising or keeping of livestock at the facility does not have financial profit as a primary aim.
- e) A new livestock management facility or new livestock waste-handling facility ~~that~~^{which} locates within ¼ mile of a neighboring farm residence shall locate at the maximum feasible location from ~~that~~^{such} residence.
- f) A new livestock management facility or new livestock waste-handling facility ~~that~~^{which} locates within ¼ mile of a non-farm residence or within ½ mile of a populated area, ~~as allowed by~~^{pursuant to} subsection (d), shall locate at the maximum feasible location from ~~the~~^{such} residence or populated area.
- g) New livestock management facilities or new livestock waste-handling facilities located on soil types or geological formations where the deposition of livestock waste is likely to cause groundwater pollution shall be constructed in such a way that pollution will be prevented, or supplementary measures shall be adopted ~~that~~^{which} will prevent pollution.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.404 Handling and Storage of Livestock Waste

- a) Any livestock waste stored in excess of six months shall be contained in a manure storage structure.
- b) Temporary Manure Stacks
- 1) A temporary manure stack is a potential secondary source, as defined by the Act. As a potential secondary source, a temporary manure stack is subject to the minimum setback zones established in Title IV of the Act ~~Temporary manure stacks shall be constructed or established and maintained in a manner to prevent runoff and leachate from entering surface or groundwaters.~~
- 2) A temporary manure stack shall not be located within 75 feet from any water well, except monitoring wells ~~No temporary manure stack shall be constructed within 100 feet of a water well.~~
- 3) A temporary manure stack shall be constructed or established and maintained in a manner to prevent runoff and leachate from entering surface waters or groundwaters. A cover and pad or other control must be

provided to prevent runoff and leachate from entering surface waters and groundwater.

c) Livestock Waste-Holding Facilities

- 1) Liquid manure-holding tanks shall be impermeable and capable of withstanding pressures and loadings to which such a tank may be subjected.
- 2) Holding ponds and lagoons shall be impermeable or so sealed as to prevent groundwater or surface water pollution.
- 3) For livestock management facilities and livestock waste handling facilities that are not required to obtain an NPDES permit, the contents of livestock waste-handling facilities shall be kept at levels such that there is adequate storage capacity so that an overflow does not occur except in the case of precipitation in excess of a 25-year 24-hour storm.
- 4) Liquid Livestock Waste
 - A) Existing livestock management facilities ~~that~~^{which} handle the waste in a liquid form shall have adequate storage capacity in a liquid manure-holding tank, lagoon, holding pond, or any combination thereof so as not to cause air or water pollution as defined in the Act or applicable regulations. If inadequate storage time causes or threatens to cause a violation of the Act or applicable regulations, the Agency may require that additional storage time be provided. In such cases, interim pollution prevention measures may be required by the Agency.
 - B) New livestock waste-handling facilities ~~that~~^{which} handle the waste in a liquid form shall provide a minimum of 120-day storage with a liquid manure-holding tank, lagoon, holding pond, or any combination thereof unless the operator has justifiable reasons substantiating that a lesser storage volume is adequate. If inadequate storage volumes cause or threaten to cause a violation of the Act or applicable regulations, the Agency may require corrective measures.

d) Runoff Field Application Systems

Any livestock management facility not meeting the definition of a CAFO in Section 501.238 may construct and operate a runoff field application system for the treatment of livestock waste from fewer than 300 animal units, meeting the requirements of 35 Ill. Adm. Code 570, in lieu of utilizing liquid manure-holding tanks, holding ponds, or lagoons in compliance with subsection (c), or other

livestock waste-handling systems ~~that which~~ would assure compliance with the Act and ~~this 35 Ill. Adm. Code Subtitle E.~~

- e) Subsections (a) through (d) shall not apply to livestock management facilities with fifty (50) or fewer animal units, provided that the following conditions exist:
- 1) The location of the facility relative to waters of the State is such that there is no discharge of livestock waste into waters of the State, in violation of Section 12 of the Act(~~Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1012~~);
 - 2) There is no discharge of livestock waste into waters of the State by means of a man-made ditch, flushing system or other similar man-made device, in violation of Section 12 of the Act(~~Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1012~~); and
 - 3) The facility is managed so that livestock waste is not allowed to accumulate to an extent ~~that which~~ threatens to cause a discharge to waters of the State, in violation of Section 12 of the Act(~~Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1012~~).

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 501.405 Field Application of Livestock Waste

- a) For livestock management facilities and livestock waste handling facilities that are not required to obtain an NPDES permit, the quantity of livestock waste applied on soils shall not exceed a practical limit as determined by soil type, especially its permeability, the condition (frozen or unfrozen) of the soil, the percent slope of the land, cover mulch, proximity to surface waters and likelihood of reaching groundwater, and other relevant considerations. These livestock waste application guidelines will be adopted pursuant to 35 Ill. Adm. Code 502.305, unless otherwise provided for by Board regulations. Facilities required to obtain an NPDES permit are subject to the requirements in 35 Ill. Adm. Code 502. Subpart F. Unpermitted Large~~large~~ CAFOs claiming an agricultural stormwater exemption must comply with 35 Ill. Adm. Code 502.102 and the practices listed in Section 502.510(b) to qualify for the exemption.
- b) Operators of livestock waste handling facilities shall practice odor control , five timemethods during the course of manure removal and field application so as not to affect a neighboring farm or non-farm residence or populated area by causing air pollution as described in Section 501.102(d). Odor control methods include, but are not limited to,
- 1) Soil injection or other methods of incorporation of waste into the soil including disking or plowing;

- 2) Consideration of climatic conditions, including wind direction and inversions;
- 3) For liquid livestock waste: whether supernatant ~~which~~ is used for irrigation purposes has been stored in a livestock waste lagoon system ~~that~~ ~~which~~ is designed and operated in accordance with "Design of Anaerobic Lagoons for Animal Waste Management", as incorporated by reference at Section 501.200.
- 4) Other methods as described in "Management~~Control~~ of Manure Odor", as incorporated by reference at Section 501.200.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

SUBPART D: SUBMITTAL OF INFORMATION

Section 501.505 Requirements for Certain CAFOs to Submit Information

- a) Existing CAFOs not covered by an NPDES permit must submit to the Agency the information listed in subsection (c) as follows:
 - 1) Large CAFOs must submit the information within 90 days after the effective date of this Section.
 - 2) CAFOs with the same or fewer animals as the numbers of animals provided in 35 Ill. Adm. Code 502.103 that propose to stable or confine additional animals must submit the information 30 days prior to increasing the number of animals above the numbers provided in 35 Ill. Adm. Code 502.103.
- b) New CAFOs that commence construction after the effective date of this Section and have a capacity for animals greater than the numbers provided in 35 Ill. Adm. Code 502.103 must submit the information in subsection (c) 30 days prior to the commencement of operations if no NPDES permit application has been filed at that time.
- c) CAFOs covered by subsections (a) and (b) must submit the following information to the Agency:
 - 1) name of all owners and operators of the facility and their mailing addresses and phone numbers;
 - 2) location of the facility identified by the street address or latitude and longitude;

- 3) location of the facility according to township, county, section, and quarter section;
 - 4) for the previous 12-month period, identification of each animal type stabled or confined at the facility and maximum number of each animal type;
 - 5) identification of types of animal holding areas, including pastures, confinement barns, and open lots;
 - 6) identification of types and capacity of livestock waste containment and storage units, including, but not limited to, anaerobic lagoons, manure stacks, underground storage pits, and storage tanks; and
 - 7) date the information in this subsection (c) is submitted to the Agency.
- d) When a CAFO that has provided information to the Agency under this Section ceases operation, the owner or operator must submit a notification of termination to the Agency within 30 days after closure of the facility.
 - e) Any CAFO required to submit information to USEPA pursuant to Section 308 of the Clean Water Act must submit the same information to the Agency simultaneously with the submittal to USEPA.
 - f) Any submittal required under this Section must be sent to:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Attn. Permit Section
P.O. Box 19276
Springfield, Illinois 62794-9276.

(Source: Added at 38 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
 SUBTITLE E: AGRICULTURE RELATED POLLUTION
 CHAPTER I: POLLUTION CONTROL BOARD

PART 502
 PERMITS

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 502.101

NPDES Permit Requirement and Duty to Maintain Permit Coverage

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502.APPENDIX A References to Previous Rules

AUTHORITY: Implementing Sections 9, 10, 12, 13, 21, and 22 of the Environmental Protection Act [415 ILCS 5/9, 10, 12, 13, 21, 22] and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/27].

SOURCE: Filed and effective January 1, 1978; amended at 2 Ill. Reg. 44, p. 137, effective October 30, 1978; codified at 7 Ill. Reg. 10594; amended in R12-23 at 38 Ill. Reg._____, effective _____.

SUBPART A: PERMITS REQUIRED

Section 502.101 NPDES Permit Requirement and Duty to Maintain Permit Coverage

- a) A ~~controlled~~ Concentrated ~~animal~~ Animal ~~feeding~~ Feeding operation Operation (CAFO) is a point source. Any discharge of pollutants into waters of the United States from a CAFO is prohibited unless authorized by an NPDES permit or unless the discharge is an agricultural stormwater discharge as described in Section 502.102(b). No person shall cause or allow a discharge from a CAFO in violation of federal or State law, including but not limited to the Clean Water Act (CWA) (33 USC 1251), the Act or Board regulations.
- b) The owner or operator of a CAFO must seek coverage under an NPDES permit if the CAFO discharges.
- c) The owner or operator of a CAFO that discharges must either apply for an individual NPDES permit or submit a notice of intent for coverage under an NPDES general permit. If the Agency has not made a general permit available to the CAFO, the CAFO owner or operator must submit an application for an individual permit to the Agency. All permit applications and applications for permit modifications must contain the information set forth in Subpart B.
- d) Any permitted CAFO shall apply for reissuance of the NPDES permit not less than 180 days prior to the expiration date of the permit unless the CAFO will not discharge after the expiration date of the NPDES permit.
- e) The owner or operator of a new CAFO that will discharge must apply for NPDES permit coverage at least 180 days prior to the time that the CAFO commences operation.
- f) Once an ~~animal~~ Animal ~~feeding~~ Feeding operation Operation (~~CAFO~~) is defined as a CAFO for at least one type of animal, the NPDES permit requirements for CAFOs apply with respect to ~~the~~ all animals in confinement at the animal feeding operation and all livestock waste generated by those animals or the production of those animals.

~~No person specified in Sections 502.102, 502.103 or 502.104 or required to have a permit under the conditions of Section 502.106 shall cause or allow the operation of any new livestock management facility or livestock waste handling facility, or cause or allow the modification of any livestock management facility or livestock waste handling facility, or cause or allow the operation of any existing livestock management facility or livestock waste handling facility without a National Pollutant Discharge Elimination System (NPDES) permit. Facility expansions, production increases, and process modifications which significantly increase the amount of livestock waste over the level authorized by the NPDES permit must be reported by submission of a new NPDES application.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.102 Land Application Discharges and Agricultural Stormwater~~Twenty-five Year Storm Event~~

- a) The discharge of livestock waste to waters of the United States from a CAFO as a result of the livestock waste application by the CAFO to land application areas is a discharge from that CAFO subject to NPDES permit requirements, except when it is an agricultural stormwater discharge and therefore exempt from the definition of a point source under section 502 of the Clean Water Act.
- b) Where livestock waste has been land applied in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the livestock waste and in compliance with Section 502.510 for permitted CAFOs and Section 502.510(b) for unpermitted Large CAFOs, a precipitation-related discharge of livestock waste from land application areas of an unpermitted large CAFO or a permitted CAFO, is an agricultural stormwater discharge.
- c) Unpermitted large CAFOs must maintain the documentation specified in Section 502.510(b)(16) either on site or at a nearby office, or otherwise make that documentation readily available to the Agency upon request.

~~An NPDES permit shall be required for an animal feeding operation which falls within the criteria set forth in Section 502.103 or Section 502.104 below; provided, however, that no animal feeding operation shall require a permit if it discharges only in the event of a 25-year 24-hour storm event.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.103 Very Large CAFOs ~~Operators~~

~~An animal Animal feeding Feeding operation Operation~~ is defined as a ~~large~~ Large CAFO if at least ~~NPDES permit is required if more than~~ the numbers of animals specified in any of the following categories are stabled or confined:

<u>Number of Animals</u>	<u>Kind of Animals</u>
<u>700</u>	<u>Mature dairy cows, whether milked or dry</u>
<u>1,000</u>	<u>Veal calves</u>
<u>1,000</u>	<u>Cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs.</u>
<u>2,500</u>	<u>Swine, each weighing 55 pounds or more</u>
<u>10,000</u>	<u>Swine, each weighing less than 55 pounds</u>
<u>500</u>	<u>Horses</u>
<u>10,000</u>	<u>Sheep or lambs</u>

<u>55,000</u>	<u>Turkeys</u>
<u>30,000</u>	<u>Laying hens or broilers, if the AFO Animal Feeding Operation uses a liquid manure handling system</u>
<u>125,000</u>	<u>Chickens (other than laying hens), if the AFO Animal Feeding Operation uses other than a liquid manure handling system</u>
<u>82,000</u>	<u>Laying hens, if the AFO Animal Feeding Operation uses other than a liquid manure handling system</u>
<u>30,000</u>	<u>Ducks, if the AFO Animal Feeding Operation uses other than a liquid manure handling system</u>
<u>5,000</u>	<u>Ducks, if the AFO Animal Feeding Operation uses a liquid manure handling system</u>

<u>Number of Animals</u>	<u>Kind of Animals</u>
1000	Brood cows and slaughter and feeder cattle
700	Milking dairy cows
500	Horses
2500	Swine weighing over 55 pounds
10,000	Sheep, lambs or goats
55,000	Turkeys
100,000	Laying hens or broilers (if the facility has continuous overflow watering)
30,000	Laying hens or broilers (if the facility has a liquid manure handling system)
5000	Ducks
1000	Animal units

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.104 Medium CAFOs ~~Large Operators~~

- a) An ~~animal~~ ~~Animal feeding~~ ~~Feeding operation~~ ~~Operation~~ is defined as a ~~medium~~ Medium CAFO NPDES permit is required if more than the following numbers and types of animals specified in any of the following categories are stabled or confined and the provisions of subsection either condition (b), or (c) or (d) below of this Section is met:

<u>Number of Animals</u>	<u>Kind of Animals</u>
<u>200 to 699</u>	<u>Mature dairy cows, whether milked or dry</u>
<u>300 to 999</u>	<u>Veal calves</u>
<u>300 to 999</u>	<u>Cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs.</u>
<u>750 to 2,499</u>	<u>Swine, each weighing 55 pounds or more</u>
<u>3,000 to 9,999</u>	<u>Swine, each weighing less than 55 pounds</u>

<u>150 to 499</u>	<u>Horses</u>
<u>3,000 to 9,999</u>	<u>Sheep or lambs</u>
<u>16,500 to 54,999</u>	<u>Turkeys</u>
<u>9,000 to 29,999</u>	<u>Laying hens or broilers, if the AFO Animal Feeding Operation uses a liquid manure handling system</u>
<u>37,500 to 124,999</u>	<u>Chickens (other than laying hens), if the AFO Animal Feeding Operation uses other than a liquid manure handling system</u>
<u>25,000 to 81,999</u>	<u>Laying hens, if the AFO Animal Feeding Operation uses other than a liquid manure handling system</u>
<u>10,000 to 29,999</u>	<u>Ducks, if the AFO Animal Feeding Operation uses other than a liquid manure handling system</u>
<u>1,500 to 4,999</u>	<u>Ducks, if the AFO Animal Feeding Operation uses a liquid manure handling system</u>

<u>Number of Animals</u>	<u>Kind of Animals</u>
300	Brood cows and slaughter or feeder cattle
200	Milking dairy cows
750	Swine weighing over 55 pounds
150	Horses
3000	Sheep, lambs or goats
16,000	Turkeys
30,000	Laying hens or broilers (if the facility has continuous overflow watering)
9000	Laying hens or broilers (if the facility has a liquid manure handling system)
1000	Ducks
300	Animal units

- b) Pollutants are discharged into navigable waters of the United States through a man-made ditch, flushing system or other similar man-made device; ~~or~~
- c) Pollutants are discharged directly into navigable waters of the United States that ~~which~~ originate outside of and pass over, across, through or otherwise come into direct contact with the animals confined in the operation; or;
- d) The ~~AFO~~ Animal Feeding Operation is designated as a CAFO by the Agency pursuant to Section 502.106.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.105 Small CAFOs ~~Voluntary Applications~~

~~An animal Animal feeding Feeding operation Operation is a small Small CAFO if it is designated as a CAFO by the Agency pursuant to Section 502.106, and it is not a Medium CAFO. ~~None of the requirements listed in this subpart precludes the voluntary filing of an NPDES application by the owner or operator of an animal feeding operation.~~~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.106 Case-By-Case ~~Case-by-case~~ Designation Requiring NPDES Permits

- a) Notwithstanding any other provision of this Part, the Agency may require any ~~animal Animal feeding Feeding operation Operation~~ not falling within ~~SectionSections~~ 502.102, 502.103 or 502.104 to obtain an NPDES permit by designating the ~~AFO Animal Feeding Operation~~ as a CAFO upon determining that it is a significant contributor of pollutants ~~to~~ waters of the United States. In making the determination of whether the ~~AFO Animal Feeding Operation~~ is a significant contributor of pollutants, such ~~designation~~ the Agency shall consider the following factors:
- 1) The size of the ~~AFO Animal Feeding Operation~~ ~~animal feeding operation~~ and the amount of livestock wastes reaching navigable waters of the United States;
 - 2) The location of the ~~AFO Animal Feeding Operation~~ ~~animal feeding operation~~ relative to navigable waters of the United States;
 - 3) The means of conveyance of livestock ~~animal~~ wastes and ~~process wastewaters~~ into navigable waters of the United States;
 - 4) The slope, vegetation, rainfall and other factors relative to the likelihood or frequency of discharge of livestock waste ~~animal wastes and process wastewaters~~ into navigable waters of the United States; and
 - 5) Other such factors bearing on the significance of the pollution problem sought to be regulated.
- b) The Agency, however, may not require a permit under ~~subsection (a) paragraph a)~~ for any ~~AFO Animal Feeding Operation~~ ~~animal feeding operation~~ with less than the number of animals ~~animal units~~ (300) set forth in Section 502.104 ~~above~~, unless it meets either of the following conditions:
- 1) Pollutants are discharged into navigable waters of the United States through a man-made ditch, flushing system or other similar man-made device; or
 - 2) Pollutants are discharged directly into navigable waters of the United States ~~that~~ which originate outside of and pass over, across, through or

otherwise come into direct contact with the animals confined in the operation.

- c) In no case may a permit application be required from an ~~AFO~~Animal Feeding Operation ~~animal feeding operation~~ designated pursuant to this ~~Section~~section until there has been an onsite inspection of the operation and a determination that the operation should and could be regulated under the permit program. ~~In addition, no application may be required from an owner or operator of an animal feeding operation designated pursuant to this section unless the owner or operator is notified in writing of the requirement to apply for a permit.~~
- d) Prior to designating an Animal Feeding Operation as a CAFO, the Agency shall send the Animal Feeding Operation a written notice that it intends to designate the Animal Feeding Operation as a CAFO. The notice shall include grounds for the designation and information regarding the opportunity to request a meeting with the Agency within 90 days of the Animal Feeding Operation's receipt of the notice to present evidence that it is not a significant contributor of pollutants to waters of the United States as provided in subsection (a) of this Section. Beginning 90 days after the initial written notice is received by the Animal Feeding Operation, the Agency may designate the Animal Feeding Operation as a CAFO. The Agency shall send the Animal Feeding Operation a written notice of its designation decision and the grounds for the designation in writing.
- e) Upon receipt of the Agency's designation decision, ~~notification that an NPDES permit is required pursuant to this Section, paragraph b)~~ the owner or operator shall make an NPDES permit application to the Agency within 90~~60~~ days. The Agency may issue an NPDES permit with a compliance schedule detailing interim steps to be taken along with a final date, not to exceed 14 months from the date the permit is issued, by which compliance with the Act and all applicable regulations shall be achieved.
- e) ~~The Agency will notify the owner or operator in writing of the Agency's decision to designate the AFO as a CAFO under this Section and the grounds for the designation. The owner or operator may file an appeal of the Agency's decision with the Board within 35 days after the date on which the Agency served the decision pursuant to Section 40(a) of the Act and 35 Ill. Adm. Code 105. No animal feeding operation may be required to have a permit if it discharges only in the event of a 25 year 24 hour storm event.~~
- f) The question of whether the designation was proper will remain open during the pendency of the permit application. Any appeal of the Agency's designation decision must be made as part of an NPDES permit appeal.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

SUBPART B: PERMIT APPLICATIONS

Section 502.201 Permit ApplicationsContents

- a) All applications from a new or existing CAFO for any permit, including an individual permit or a general permit, required under this Chapter shall contain, where appropriate, the following information and documents:
- 1) The name of the owner or operator;
 - 2) The facility location and mailing addresses;
 - 3) The latitude and longitude at the entrance to the production area;
 - 4) Specific information about the average and maximum number and type of animals, whether in open confinement or housed under roof (beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, ducks, turkeys, other);~~Kinds and numbers of livestock;~~
 - 5) A statement as to any projected changes in the size of the livestock operation and when they may occur during the term of the permit;
 - 6) The type of containment and storage (anaerobic lagoon, roofed storage shed, storage ponds, underfloor pits, above ground storage tanks, below ground storage tanks, concrete pad, impervious soil pad, other) and total capacity for manure, litter, and process wastewater storage (in tons or gallons);~~Description of land areas used for the livestock management facilities and livestock waste handling facilities and land areas used for livestock waste disposal;~~
 - 7) A topographic map of the geographic area in which the CAFO is located showing the specific location of the production area and land application areas, and indicating the following:~~A sketch of the existing and/or proposed facility indicating the following:~~
 - A) Approximate overall dimensions of the facility;
 - ~~B)~~ Direction and location of surface and subsurface drainage and other discharges from the facility; and
 - ~~C)~~ Location~~General location~~ of waterways in the area.;
 - ~~D)~~ Location of area for manure disposal; and
 - ~~E)~~ A marked-up aerial photograph or U.S. Geological Survey map of the area involved is desirable in lieu of a sketch.

- 8) Estimated amounts of livestock waste generated per year (in tons or gallons);
 - 9) The total number of acres of land application area and the estimated amount of waste to be applied to those acres per year;
 - 10) Estimated amount of livestock waste transferred to other persons per year (in tons or gallons);
 - 11) A nutrient management plan that is consistent with the requirements of Subpart E;
 - 12) A stormwater pollution prevention plan;
 - 13) A spill control and prevention plan; and
 - 145) A statement identifying and justifying any departure from current design criteria promulgated by the Agency.
- b) The Agency may adopt procedures requiring such additional information as is necessary to determine whether the CAFO livestock management facility or livestock waste handling facility will meet the requirements of the Act and applicable Board regulations~~regulations~~.
 - c) Applicable requirements of 35 Ill. Adm. Code 309: Subpart A shall apply to applications for NPDES permits required by this Chapter~~chapter~~. The Agency may prescribe the form in which information required under this Section~~section~~ shall be submitted.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.202 Permit Application Submissions~~Registered or Certified Mail~~

All permit applications shall be mailed, ~~or delivered~~ or electronically submitted to the appropriate address designated by the Agency. ~~Any application or revised application sent by mail shall be sent by registered or certified mail, return receipt requested. Applications which are hand delivered shall be delivered to and received for by any authorized person employed in the Permit Section of the Agency's Division of Water Pollution Control.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.203 New Applications (Repealed)

~~Any person now discharging whose discharge was not covered by the Refuse Act permit program (33 U.S.C. 407), but which is subject to the NPDES program, must apply for an~~

~~NPDES permit on the effective date of this chapter. However, for purposes of this chapter, any person who has applied for an NPDES permit from the U.S. Environmental Protection Agency and whose application has not been denied, shall be considered to have applied for an NPDES permit unless the discharge described in the Application for an NPDES Permit has substantially changed in nature, volume, or frequency; in which case another NPDES permit application shall be submitted.~~

(Source: Repealed at 38 Ill. Reg. _____, effective _____)

Section 502.204 Renewal

~~Permittees seeking reissuance of their NPDES permit pursuant to Section 502.101(d) who wish to continue to discharge subsequent to the expiration date of their permit must apply for reissuance of the permit, using proper forms, not less than 180 days prior to the permit expiration date. The Agency will notify thosesueh persons of the need for renewal at least 60 days prior to the date on which the renewal application must be submitted; however, failure to do so does not excuse non-compliance with this Chapterchapter.~~

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.205 New Operations (Repealed)

~~Any person whose livestock waste handling facility or livestock management facility is required by Sections 502.101, 502.102, 502.103 or 502.104 to obtain a permit and will begin operation on or after the effective date of these Regulations must apply for an NPDES permit no later than 180 days in advance of the date on which the facility is to commence operation minus the number of days available storage time for installed manure storage structures.~~

(Source: Repealed at 38 Ill. Reg. _____, effective _____)

Section 502.207 Disclosure Required for Land Trusts

An applicant filing for an NPDES permit shall satisfy the requirements of the Land Trust Beneficial Interest Disclosure Act [735 ILCS 405 et. seq.].~~"An Act to Require disclosure, under certification of perjury, of all beneficial interests in real property held in a land trust, in certain cases" (Ill. Rev. Stat. 1981, ch. 148, par. 72)~~ before the Agency grants the applicant its permit.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

SUBPART C: PERMIT ISSUANCE AND CONDITIONS

Section 502.304 Issuance and Conditions

- a) The provisions of 35 Ill. Adm. Code 309: Subpart A shall apply to the issuance, conditions and modification of NPDES permits under this Chapterchapter in the same manner as thosesueh provisions apply to NPDES permits issued pursuant to

35 Ill. Adm. Code 309. Specific provisions applicable to CAFOs seeking coverage under NPDES general permits are found in Section 502.310.

- b) In addition to specific conditions authorized under this Part, the Agency may impose such conditions in any permit issued pursuant to this Part as may be necessary to accomplish the purposes of the Act or Board regulations.

(Source: Amended at 38 Ill. Reg. _____, effective _____)

Section 502.310 CAFOs Seeking Coverage Under NPDES General Permits

- a) CAFO owners or operators must submit a notice of intent that meets the requirements of Section 502.201 and Subpart E of this Part when seeking authorization to discharge under a general permit.
- b) When additional information is necessary to complete the notice of intent or to clarify, modify, or supplement previously submitted material, the Agency may request that information from the owner or operator as provided in 35 Ill. Adm. Code 309.106.
- c) The Agency must notify the public of its proposal to grant coverage under the general permit to the CAFO. This public notice must include the CAFO's nutrient management plan.
- d) The process for submitting public comments and hearing requests, and the hearing process if a request for a hearing is granted, will follow the procedures applicable to draft individual permits found in 35 Ill. Adm. Code 309.109(b) and 309.115 through 309.118.
- e) The time period for the public to comment and request a hearing is 30 days following the date of the notice issued pursuant to subsection (c).
- f) When a public hearing is held, the Agency must respond to significant comments received during the comment period as provided in 35 Ill. Adm. Code 309.119 and 309.120, except that notice and transmission to the USEPA Regional Administrator is not required. If no hearing is held, the Agency shall follow the procedures in 35 Ill. Adm. Code 309.112 and 309.120 for Agency action after the comment period. If necessary, the Agency will require the CAFO owner or operator to revise the nutrient management plan in order to be granted permit coverage.
- g) When the Agency authorizes coverage for the CAFO owner or operator under the general permit, the terms of the nutrient management plan shall become incorporated as terms and conditions of the permit for the CAFO. This incorporation of terms and conditions does not require a modification of the general permit.

- h) The Agency shall notify the CAFO owner or operator and inform the public that coverage has been authorized and of the terms of the nutrient management plan incorporated as terms and conditions of the permit applicable to the CAFO.
- i) Nothing in this Section shall limit the Agency's authority to require an individual NPDES permit pursuant to Section 39(b) of the Act.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.315 CAFO Permit Requirements

NPDES permits issued to CAFOs under this Part must include:

- a) Requirements to implement a nutrient management plan that meets the provisions of Subpart E.
- b) Requirements for the permittee to create, maintain for five years from creation on site, and make available to the Agency, upon request, a complete copy of the records required in Section 502.320.
- c) Annual reporting requirements for permitted CAFOs. The permittee must submit an annual report to the Agency. The annual report must include the information specified in Section 502.325.
- d) Requirements to comply with the livestock waste discharge limitations in Subparts F, G and H, if applicable.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.320 Recordkeeping Requirements

The permittee must create, maintain for five years, and make available to the Agency, upon request, the following records:

- a) A copy of all applicable records identified pursuant to Section 502.510(b)(16);
- b) A copy of the information required under Section 502.201;
- c) Records documenting the visual inspections required under Section 502.610(c);
- d) Weekly records of the depth of the manure and process wastewater in the liquid livestock waste storage as indicated by the depth marker, as described in Section 502.610(d);

- e) Records documenting any actions taken to correct deficiencies as required by Sections 502.610(e) and (f). Deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction;
- f) Records of mortalities management and practices used by the facility to meet the requirements of Section 502.610(g);
- g) Records documenting the current design of any livestock waste storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity;
- h) Records of the date, time, and estimated volume of any overflow;
- i) A copy of the facility's site-specific nutrient management plan;
- j) Expected crop yields for land application areas;
- k) The dates livestock waste is applied to each land application area;
- l) Records documenting subsurface drainage inspections conducted according to the plan developed pursuant to Section 502.510(b)(13);
- m) Results from livestock waste and soil sampling;
- n) Explanation of the basis for determining livestock waste application rates;
- o) Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than livestock waste;
- p) Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied;
- q) The method used to apply the livestock waste;
- r) Date of livestock waste application equipment inspection;
- s) Maximum number and type of animals, whether in open confinement or housed under roof by the following types: beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, turkeys, ducks, other;
- t) All records necessary to prepare the annual report required by Section 502.325;
- u) Total number of acres of land application area covered by the nutrient management plan;

- v) The quantity of livestock waste removed when a manure storage area or waste containment area is dewatered;
- w) The following information for each day during which livestock wastes are applied to land:
 - 1) the amount applied to each field in either gallons, wet tons or dry tons per acre;
 - 2) soil water conditions at the time of application (such as dry, saturated, flooded, frozen, snow-covered);
 - 3) an estimate of the amount of precipitation 24 hours prior to, and for 24 hours after, the application;
 - 4) the type of application method used (surface, surface with incorporation, or injection);
 - 5) the location of the field where livestock waste was applied;
 - 6) the results of leak inspection of livestock waste application equipment;
 - 7) the name and address of off-site recipients of livestock waste, the amount of waste transferred to each off-site recipient in gallons or dry tons, off-site location on a topographic map, and acreage of each site used by the off-site recipient;
 - 8) Weather conditions, including precipitation, air temperature, wind speed, wind direction and dew point, at time of land application and for 24 hours prior to and for 24 hours following application; and
 - 9) Records of the weather forecasts required to be maintained pursuant to Sections 502.620(d) and 502.630(b)(3), (4), and (5);
- x) The laboratory analysis sheets reporting the analysis of the livestock waste samples shall be kept on file at the facility for the term of the permit and for 5 years after expiration of the permit; and
- y) Records documenting the test methods and sampling protocols for manure, litter and process wastewater and soil analyses.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.325 Annual Report

- a) The NPDES permit must specify annual reporting requirements for the CAFO. The annual report must be submitted to the Agency.
- b) The annual report must contain the following minimum elements:
- 1) Maximum number and type of animals, whether in open confinement or housed under roof by the following types: beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, turkeys, ducks, other;
 - 2) Quantity of livestock waste generated by the facility in the previous 12 months (tons/gallons);
 - 3) Quantity of livestock waste transferred to another person by the facility in the previous 12 months (in tons or gallons);
 - 4) Total number of acres of land application area covered by the nutrient management plan;
 - 5) Total number of acres the CAFO used for land application of livestock waste in the previous 12 months and were under the control of the CAFO through ownership, lease, or consent agreement;
 - 6) A statement indicating whether the current version of the CAFO's nutrient management plan for land application of livestock waste was developed or approved by a certified nutrient management planner and by whom the certification was issued;
 - 7) Summary of all livestock waste discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume;
 - 8) A report of instances of non-compliance with the NPDES permit in the previous 12 months;
 - 9) The actual crops planted and actual yields for each field;
 - 10) The actual nitrogen and phosphorus content of the livestock waste;
 - 11) The results of calculations conducted in accordance with Section 502.515(d)(3) and (e)(3);
 - 12) The amount of livestock waste land applied to each field during the previous 12 months;

- 13) For any CAFO that implements a nutrient management plan that addresses rates of application in accordance with Section 502.515(e):
- a) the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months;
 - b) data used in calculations conducted in accordance with Section 502.515(e)(3), and
 - c) the amount of any supplemental fertilizer applied during the previous 12 months; and
- 14) Annual review of the nutrient management practices to be implemented and an update of the nutrient management plan when there is a change in the nutrient management practices.

(Source: ~~Added~~^{Amended} at 38 Ill. Reg. _____, effective _____)

SUBPART E: REQUIREMENTS FOR DEVELOPING AND IMPLEMENTING NUTRIENT MANAGEMENT PLANS

Section 502.500 Purpose, Scope and Applicability

The requirements in this Subpart are intended to minimize the transport of nitrogen and phosphorus to waters of the United States in compliance with the nutrient management plan developed by the CAFO owner or operator.

- a) The requirements in this Subpart apply to CAFOs required to obtain an NPDES permit. Unpermitted large CAFOs claiming an agricultural stormwater exemption ~~must comply with Sections~~ pursuant to Section 502.102 are not required to have a nutrient management plan but must comply with ~~and~~ the requirements listed in Section 502.510(b) to qualify for the exemption.
- b) The CAFO owner or operator shall develop, submit and implement a site specific nutrient management plan. This plan shall specifically identify and describe practices that will be implemented to assure compliance with this Subpart and the livestock waste discharge limitations and technical standards of Subparts F, G, and H.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.505 Nutrient Management Plan Information

The nutrient management plan shall contain, at a minimum, the following items:

- a) Name, address, and phone number of the owners of the CAFO;

- b) Name, address, and phone number of the managers or operators if different than the owners;
- c) Address, phone number, and plat location of the CAFO production area;
- d) Name of the person who developed the nutrient management plan and a statement indicating whether it was developed or approved by a certified nutrient management planner and by whom the certification was issued;
- e) Type of waste storage for the CAFO;
- f) Species, size and maximum number of animals at the CAFO;
- g) Scaled aerial photos or maps depicting each field available and intended for livestock waste applications with available acreage listed and indicating residences, non-farm businesses, common places of assembly, streams, wells, waterways, lakes, ponds, rivers, drainage ditches, subsurface drainage systems, other water sources, 10-year flood plain, buffers, slope, locations of structural Best Management Practices, setbacks and areas restricted from application by this Subpart E;
- h) For land application areas not owned or rented by the owner or operator of the CAFO, copies of the statement of consent between the owner or operator of the livestock facilities and the owner of the land where livestock waste will be applied;
- i) Cropping schedule for each field for the past year, anticipated crops for the current year, and anticipated crops for the five year term of the permit;
- j) Realistic crop yield goal for each crop in each field;
- k) An estimate of the nutrient value of the livestock waste or results of livestock waste analysis determined pursuant to Section 502.625(c);
- l) Livestock waste application methods;
- m) Results of the Bray P1 or Mehlich 3 test for soil phosphorus, in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200, reported in pounds of elemental phosphorus per acre. If the livestock waste is to be land applied based on a single year or multi-year phosphorus application on the land application area, the following items must be provided:
 - 1) An estimate of the volume of livestock waste to be disposed of annually;

- 2) The phosphorus content of the livestock waste;
 - 3) The phosphorus amount needed for each crop in the planned crop rotation, expressed as pounds of P₂O₅ per acre, obtained from the Illinois Agronomy Handbook, 24th Edition, incorporated by reference at 35 Ill. Adm. Code 501.200; and
 - 4) The maximum livestock waste application rate based on phosphorus for each field, determined pursuant to Section 502.625(g).
- n) Calculations showing the following:
- 1) An estimate of the volume of livestock waste to be disposed of annually;
 - 2) Nitrogen loss due to the method of storage, if applicable;
 - 3) Amount of nitrogen available for application;
 - 4) Nitrogen loss due to the method of application;
 - 5) Amount of plant-available nitrogen including first-year mineralization of organic nitrogen;
 - 6) Amount of nitrogen required by each crop in each field based on realistic crop yield goal;
 - 7) Nitrogen credits from previous crops, from other sources of fertilizer applied for the growing season, and from any livestock waste applications during the previous three years for each field;
 - 8) Livestock waste application rate based on nitrogen for each field; and
 - 9) Land area required for application;
- o) A listing of fields and the planned livestock waste application amounts for each field.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.510 Nutrient Management Plan Requirements

- a) Any permit issued to a CAFO must include a requirement to implement a nutrient management plan by the date of permit coverage that, at a minimum, contains best management practices necessary to meet the requirements of this Section and the applicable livestock discharge limitations and technical standards in 35 Ill. Adm. Code 501 and 502.

- b) The nutrient management plan must specify and demonstrate:
- 1) The livestock waste application rate of nitrogen in a single year and phosphorus in a single year or multiple years, not to exceed the single year crop nitrogen and single year or multi-year phosphorus requirements for realistic crop yield goals in the rotation;
 - 2) Adequate land application area for livestock waste application which may include:
 - A) land owned by the CAFO owner or operator;
 - B) land rented or leased by the CAFO;
 - C) land covered by a consent agreement between the CAFO owner or operator and the property owner; or
 - D) any combination of the land described in subsection (b)(2)(A) through (C);
 - 3) Adequate storage of livestock waste, including procedures to ensure proper operation and maintenance of the storage facilities;
 - 4) Proper management of mortalities to ensure that they are not disposed of in a liquid livestock waste or stormwater storage or treatment system that is not specifically designed to treat animal mortalities;
 - 5) That clean water is diverted, as appropriate, from the production area;
 - 6) Prevention of direct contact of confined animals with waters of the United States;
 - 7) That chemicals and other contaminants handled on-site are not disposed of in any livestock waste or stormwater storage or treatment system unless specifically designed to treat those chemicals and other contaminants;
 - 8) Appropriate site specific conservation practices to be implemented, including, as appropriate, buffers or equivalent practices, to control runoff of pollutants to waters of the United States;
 - 9) Protocols for appropriate testing of livestock waste and soil. Livestock waste must be analyzed a minimum of once annually for nitrogen and phosphorus content, and soil analyzed a minimum of twice every five years for phosphorus content. The results of these analyses are to be used in determining application rates for livestock wastes;

- 10) Protocols to land apply livestock waste in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the livestock waste;
- 11) Livestock waste shall not be applied within the distance from residences provided in Section 502.645(a) and within the areas prohibited from land application by this Part;
- 12) A winter time land application plan that meets the requirements of Section 502.630;
- 13) The plan for the inspection, monitoring, management and repair of subsurface drainage systems at the livestock waste application site. Inspection of subsurface drainage systems shall include visual inspection prior to land application to determine failures that may cause discharges and visual inspection during and after land application to identify discharges;
- 14) A spill prevention and control plan;
- 15) Annual review of the nutrient management practices to be implemented and an update of the nutrient management plan when there is a change in the nutrient management practices;
- 16) Specific records that will be maintained to document the implementation and management of the minimum elements described in subsections (b)(2) through (15); and
- 17) A description of the storage provisions and schedules provided for livestock waste when cropping practices, soil conditions, weather conditions or other conditions prevent the application of livestock waste to land or prevent other methods of livestock waste disposal.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.515 Terms of Nutrient Management Plan

Any permit issued to a CAFO must require compliance with the terms of the CAFO's site-specific nutrient management plan. These terms include:

- a) The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan determined by the Agency to be necessary to meet the requirements of Sections 502.505 and 502.510.

- b) The terms of the nutrient management plan, with respect to protocols for land application of livestock waste as required by Subpart F, must include:
- 1) the fields available for land application;
 - 2) field-specific rates of application properly developed pursuant to subsection (d) or (e) to ensure appropriate agricultural utilization of the nutrients in the livestock waste; and
 - 3) any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application.
- c) The terms of the nutrient management plan must address rates of application using either the linear approach as described in subsection (d) or the narrative rate approach as described in subsection (e), unless the Agency specifies that only one of these approaches may be used.
- d) The linear approach is an approach that expresses rates of application as pounds of nitrogen and phosphorus, according to the following specifications:
- 1) The terms include maximum application rates from livestock waste for each year of permit coverage, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Agency, in pounds per acre, per year, for each field to be used for land application, and certain factors necessary to determine those rates.
 - 2) At a minimum, the factors that are terms must include:
 - A) the outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field;
 - B) the crops to be planted in each field or any other uses of a field such as pasture or fallow fields;
 - C) the realistic yield goal for each crop or use identified for each field;
 - D) the nitrogen and phosphorus recommendations, according to Section 502.625, for each crop or use identified for each field;
 - E) credits for all nitrogen in the field that will be plant available;
 - F) consideration of multi-year phosphorus application;
 - G) accounting for all other additions of plant available nitrogen and phosphorus to the field;

- H) the form and source of livestock waste to be land-applied;
 - D) the timing and method of land application; and
 - J) the methodology by which the nutrient management plan accounts for the amount of nitrogen and phosphorus in the livestock waste to be applied.
- 3) CAFOs that use this linear approach must calculate the maximum amount of livestock waste to be land applied at least once each year using the results of the most recent representative livestock waste tests for nitrogen and phosphorus taken within 12 months ~~of~~ after the date of land application required by Section 502.635.
- e) The narrative rate approach is an approach that expresses rates of application as a narrative rate of application that results in the amount, in tons or gallons, of livestock waste to be land applied, according to the provisions of this subsection (e).
- 1) The terms include:
 - A) maximum amounts of nitrogen and phosphorus derived from all sources of nutrients, for each crop identified in the nutrient management plan, in chemical forms determined to be acceptable to the Agency, in pounds per acre, for each field, and certain factors necessary to determine those amounts;
 - B) the outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field;
 - C) the crops to be planted in each field or any other uses, such as pasture or fallow fields, including alternative crops identified in accordance with subsection (e)(1)(G);
 - D) the realistic yield goal for each crop or use identified for each field;
 - E) the nitrogen and phosphorus recommendations according to Section 502.625 for each crop or use identified for each field;
 - F) the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of livestock waste to be land applied:
 - i) results of soil tests conducted in accordance with protocols identified in the nutrient management plan, as required by Section 502.510(b)(9);

- ii) credits for all nitrogen in the field that will be plant available;
 - iii) the amount of nitrogen and phosphorus in the livestock waste to be applied;
 - iv) consideration of multi-year phosphorus application;
 - v) accounting for all other additions of plant nitrogen and phosphorus to the field;
 - vi) the form and source of livestock waste;
 - vii) the timing and method of land application; and
 - viii) volatilization of nitrogen and mineralization of organic nitrogen.
- G) alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation.
- i) When a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations according to Section 502.625 for each crop.
 - ii) Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of livestock waste to be applied must be determined in accordance with the methodology described in subsections (e)(1)(A) through (F).
- 2) For CAFOs using this narrative approach, the following projections must be included in the nutrient management plan submitted to the Agency, but are not terms of the nutrient management plan:
- A) the CAFO's planned crop rotations for each field for the period of permit coverage;
 - B) the projected amount of livestock waste to be applied;

- C) projected credits for all nitrogen in the field that will be plant available;
 - D) consideration of multi-year phosphorus application;
 - E) accounting for all other additions of plant available nitrogen and phosphorus to the field;
 - F) the predicted form, source, and method of application of livestock waste for each crop; and
 - G) timing of application for each field, insofar as it concerns the calculation of rates of application.
- 3) CAFOs that use this narrative rate approach must calculate maximum amounts of livestock waste to be land applied at least once each year using the methodology required in subsections (e)(1)(A) through (F) before land applying livestock waste and must rely on the following data:
- A) a field-specific determination of nitrogen that will be plant available consistent with the methodology required by subsections (e)(1)(A) through (F), and for phosphorus, the results of the most recent soil test conducted in accordance with soil testing requirements approved by the Agency; and
 - B) the results of most recent representative livestock waste tests for nitrogen and phosphorus taken within 12 months of ~~after~~ the date of land application, in order to determine the amount of nitrogen and phosphorus in the livestock waste to be applied.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.520 Changes to the ~~Nutrient~~ Nutrient Management Plan

When a CAFO owner or operator makes changes to the CAFO's nutrient management plan ~~previously~~ previously submitted to the Agency, the procedures in this Section are applicable.

- a) The CAFO owner or operator must identify changes to the nutrient management plan, except that the results of calculations made in accordance with the requirements of Sections 502.515(d)(3) and (e)(3) are not subject to the requirements of this Section. These ~~calculation~~ calculations may be revised without submittal to the Agency provided the calculation revisions do not change the terms of the nutrient management plan.

- b) The Agency must determine whether the changes to the nutrient management plan necessitate revision to the terms of the nutrient management plan incorporated into the permit issued to the CAFO.
- 1) If revision to the terms of the nutrient management plan is not necessary, the Agency must notify the CAFO owner or operator and, upon such notification, the CAFO may implement the revised nutrient management plan.
 - 2) If revision to the terms of the nutrient management plan is necessary, the Agency must determine whether the changes are substantial changes as described in subsection (d).
 - 3) If the Agency determines that the changes to the terms of the nutrient management plan are not substantial, the Agency must notify the owner or operator and inform the public of any changes to the terms of the nutrient management plan that are incorporated into the permit.
- c) If the Agency determines that the changes to the terms of the nutrient management plan are substantial, the Agency must notify the public and make the proposed changes and the information submitted by the CAFO owner or operator available for public review and comment.
- 1) The process and time limits for submitting public comments and hearing requests, the hearing process if a request for a hearing is granted, and the process for responding to significant comments received during the comment period will follow the procedures applicable to draft general permits found in Section 502.310(d) through (f).
 - 2) The Agency will require the CAFO owner or operator to further revise the nutrient management plan, if necessary, in order to approve the revision to the terms of the nutrient management plan incorporated into the CAFO's permit.
 - 3) Once the Agency incorporates the revised terms of the nutrient management plan into the permit, the Agency must notify the owner or operator and inform the public of the final decision concerning the revisions to the terms and conditions of the permit.
- d) Substantial changes to the terms of the nutrient management plan incorporated as terms and conditions of a permit include, but are not limited to:
- 1) Addition of new land application areas not previously included in the CAFO's nutrient management plan; except that, if the land application area that is being added to the nutrient management plan is covered by the terms of a nutrient management plan incorporated into an existing NPDES

permit in accordance with the requirements of Section 502.515, and the CAFO owner or operator applies livestock waste on the newly added land application area in accordance with the existing field-specific permit terms applicable to the newly added land application area, addition of new land would be a change to the new CAFO owner's or operator's nutrient management plan but not a substantial change for purposes of this Section;

- 2) For nutrient management plans using the linear approach as set forth in Section 502.515(d), changes to the field-specific maximum annual rates of land application (pounds of nitrogen and phosphorus from livestock waste). For nutrient management plans using the narrative rate approach, changes to the maximum amounts of nitrogen and phosphorus derived from all sources for each crop;
- 3) Addition of any crop or other uses not included in the terms of the CAFO's nutrient management plan and corresponding field-specific rates of application expressed in accordance with Section 502.515; and
- 4) Changes to site-specific components of the CAFO's nutrient management plan, when the changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the United States.

(Source: Added at 38 Ill. Reg. _____, effective _____)

SUBPART F: LIVESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS

Section 502.600 Applicability

- a) This Subpart provides livestock waste discharge limitations and technical standards for permitted CAFOs. Permitted CAFOs must achieve the livestock waste discharge limitations and technical standards in this Subpart as of the date of permit coverage. ~~Unpermitted large CAFOs claiming an agricultural stormwater exemption must comply with Sections 502.102 and 502.510(b) and are subject to portions of this Subpart to the extent required by Section 502.510(b).~~ This Subpart does not apply to CAFOs that stable or confine horses, sheep or ducks. CAFOs that stable or confine horses or sheep are subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.720. CAFOs that confine ducks in either a dry lot or wet lot are subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.730.
- b) Unpermitted Large CAFOs claiming an agricultural stormwater exemption pursuant to Section 502.102 are not required to have a nutrient management plan but must comply with the requirements listed in Section 502.510(b) to qualify for the exemption.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.605 Livestock Waste Discharge Limitations for the Production Area for Permitted CAFOs

- a) Except as provided in subsections (a)(1), (a)(2) and (c), there must be no discharge of livestock wastes into waters of the United States from the CAFO production area. Whenever precipitation causes an overflow of livestock wastes from the containment or storage structure, livestock wastes in the overflow may be discharged into waters of the United States provided:
- 1) The production area is designed, constructed, operated and maintained to contain all livestock wastes, including the runoff and the direct precipitation from a 25-year, 24-hour precipitation event, except that, for swine, poultry or veal, large CAFOs that are new sources must comply with Subpart H, and
 - 2) The production area is operated in accordance with the additional measures and records required by Section 502.610.
- b) Any point source subject to this Subpart must achieve the livestock waste discharge limitations in this Section as of the date of the permit coverage.
- c) Voluntary Alternative Performance Standards. Any CAFO subject to this Subpart may request the Agency to establish NPDES permit livestock waste discharge limitations based upon site-specific alternative technologies that achieve a quantity of pollutants discharged from the production area equal to or less than the quantity of pollutants that would be discharged under the baseline performance standards as provided by subsection (a).
- 1) In requesting site-specific livestock waste discharge limitations to be included in the NPDES permit, the CAFO owner or operator must submit a supporting technical analysis and any other relevant information and data that would support those site-specific livestock waste discharge limitations within the time frame provided by the Agency.
 - 2) The supporting technical analysis must include calculation of the quantity of pollutants discharged, on a mass basis when appropriate, based on a site-specific analysis of a system designed, constructed, operated, and maintained to contain all livestock waste, including the runoff from a 25-year, 24-hour rainfall event.
 - 3) The technical analysis of the discharge of pollutants must include:

- A) all daily inputs to the storage system, including livestock waste, direct precipitation, and runoff;
 - B) all daily outputs from the storage system, including losses due to evaporation, sludge removal, and removal of wastewater for use on cropland at the CAFO or transport off site;
 - C) a calculation determining the predicted median annual overflow volume based on a 25-year period of actual rainfall data applicable to the site;
 - D) site-specific pollutant data, including nitrogen, phosphorus, BOD₅ and total suspended solids, for the CAFO from representative sampling and analysis of all sources of input to the storage system, or other appropriate pollutant data; and
 - E) predicted annual average discharge of pollutants, expressed, when appropriate, as a mass discharge on a daily basis (lbs/day), and calculated considering subsections (c)(3)(A) through (D).
- 4) The Agency has the discretion to request additional information to supplement the supporting technical analysis, including inspection of the CAFO.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.610 Additional Measures for CAFO Production Areas

Each CAFO subject to this Subpart must implement the following:

- a) The CAFO owner or operator must at all times properly operate and maintain all structural and operational aspects of the facilities, including all systems for livestock waste treatment, storage, management, monitoring and testing.
- b) Livestock within a CAFO production area shall not come into contact with waters of the United States.
- c) Visual Inspections. There must be routine visual inspections of the CAFO production area. At a minimum, the following must occur:
 - 1) Weekly inspections of all stormwater diversion devices, runoff diversion structures, and devices channeling contaminated stormwater to the wastewater and manure storage and containment structure;
 - 2) Daily inspection of water lines in the production areas, including drinking water or cooling water lines; and

- 3) Weekly inspections of the livestock waste storage facilities. The inspection will note the level in the liquid livestock waste storage facility using the depth marker required in subsection (d).
- d) Depth Marker. All open surface liquid livestock waste storage facilities must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. In the case of new sources subject to livestock waste discharge limitations established pursuant to Section 502.830, all open surface livestock waste storage structures associated with the sources must include a depth marker that clearly indicates the minimum capacity necessary to contain the maximum runoff and direct precipitation associated with the design storm used in sizing the storage facility for no discharge.
- e) Corrective Actions. Any deficiencies found as a result of these inspections must be corrected as soon as possible.
- f) In addition to the requirement in subsection (e), deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.
- g) Discharge to waters of the United States of pollutants from dead livestock or dead animal disposal facilities is prohibited. Dead livestock and water contaminated by dead livestock shall not be disposed of in the liquid manure storage structures, egg wash wastewater facilities, egg processing wastewater facilities, or areas used to hold products, by-products or raw materials that are set aside for disposal, or contaminated stormwater facilities, other than facilities used solely for disposal of dead livestock.
- h) Chemicals and other contaminants shall not be disposed of in any livestock waste or stormwater storage or treatment system unless specifically designed to treat those chemicals and other contaminants.
- i) A CAFO owner or operator utilizing an earthen lagoon or other earthen manure storage area or waste containment area shall inspect all berm tops, exterior berm sides, and non-submerged interior berm sides for evidence of erosion, burrowing animal activity, and other indications of berm degradation on a frequency of not less than once every week.
- j) The CAFO owner or operator shall perform periodic removal of livestock waste solids from liquid manure storage areas and the waste containment area to maintain proper operation of the storage structures. Soils that are contaminated with livestock waste removed from earthen manure storage structures shall be considered livestock waste.

- k) Requirements Relating to Transfer of Livestock Waste to Other Persons.
- 1) Prior to transferring livestock waste to other persons, CAFOs must provide the recipient of the livestock waste with the most current nutrient analysis.
 - 2) The analysis provided must be consistent with applicable requirements to sample livestock wastes in Section 502.635(b).
 - 3) CAFOs must retain for five years records of the date, recipient name and address, and approximate amount of livestock waste transferred to another person.
- l) Livestock Waste Storage Requirements
- 1) Livestock waste storage structures at the CAFO production area shall be designed to contain a volume equal to or greater than the sum of the volumes of the following:
 - A) the amount of waste generated during a 180-day period of operation at design capacity;
 - B) the runoff volumes generated during a 180-day period, including all runoff and precipitation from lots, roofs and other surfaces where precipitation is directed into the storage structure;
 - C) the volume of all wash down liquid generated during the 180-day period that is directed into the manure storage structure;
 - D) the volume of runoff and precipitation directed to the storage structure during a 25-year, 24-hour storm event;
 - E) the design volatile solids loading volume, if applicable;
 - F) the sludge accumulation volume, if applicable; and
 - G) a freeboard of 2 feet, except for structures with a cover or otherwise protected from precipitation.
 - 2) The storage volume requirements in this subsection (l) do not apply to pump stations, settling tanks, pumps, piping or other components of the CAFO production area that temporarily hold or transport waste to a storage facility meeting the requirements of this subsection (l).

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.615 Nutrient Transport Potential

- a) Field Assessment. An individual field assessment of the potential for nitrogen and phosphorus transport from the field to surface waters must be conducted and the results contained in the nutrient management plan. The following factors must be identified for each field to determine nitrogen and phosphorus transport potential to waters of the United States.
- 1) Soil type;
 - 2) Slope;
 - 3) Conservation practices;
 - 4) Soil erodibility or potential for soil erosion;
 - 5) Soil test phosphorus;
 - 6) Tile inlet locations;
 - 7) Distance to surface waters;
 - 8) Proximity to wells;
 - 9) Location of conduits to surface water, including preferential flow paths; and
 - 10) Subsurface drainage tiles.
- b) The applicant shall utilize the field assessment information obtained in subsection (a) to determine the appropriate phosphorus-based or nitrogen-based application rate for each assessed field. The determination of phosphorus-based or nitrogen-based application of livestock waste on an assessed field must be consistent with subsection (c) or (d) and Sections 502.620, 502.625, 502.630, and 502.635.
- c) Nitrogen-based application of livestock waste must be conducted consistent with the following requirements:
- 1) livestock waste is applied consistent with the setback requirements in Section 502.645;
 - 2) available soil phosphorus (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central

Region, incorporated by reference in 35 Ill. Adm. Code 501.200) is equal to or less than 300 pounds per acre;

- 3) the soil loss calculated using the Revised Universal Soil Loss Equation 2 (RUSLE2) is less than the ~~erosion factor~~Erosion Factor T;

BOARD NOTE: Soil loss may be calculated using the Revised Universal Soil Loss Equation 2 (RUSLE 2) software program available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm, and Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington, DC 20250 (202) 720-3656. Erosion Factor T for Illinois soils is available from the United States Department of Agriculture Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign, IL 61821 (217) 353-6676. Service's (USDA-NRCS) The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov> at http://soils.usda.gov/survey/printed_surveys/state.asp?state=Illinois&abbr=IL

- 4) if conduits on the field are less than 400 feet from surface waters, the setback requirements in Section 502.645(b)(2) do not apply. Instead the following setbacks apply:
- A) Livestock waste application shall be conducted no closer than:
- i) 150 feet from a tile inlet, agricultural well head, sinkhole, or edge of a ditch that has no vegetative buffer; or
 - ii) 50 feet from a tile inlet, agricultural well head, sinkhole, or edge of a ditch that has a 50 foot vegetative buffer or 50 feet from the center of a grass waterway;
- B) These setbacks do not apply if the CAFO is able to demonstrate to the Agency that a setback or buffer is not necessary because implementation of alternative conservation practices (including, but not limited to, injection and incorporation) or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions that would be achieved by the 150-foot setback under subsection (c)(4)(A)(i) or the 50-foot setback under subsection (c)(4)(A)(ii);
- 5) if conduits on the field are more than 400 feet from surface waters, the setback requirements in subsection (c)(4) do not apply;

- 6) where surface waters are on the assessed field or within 200 feet of the field, the livestock waste applied to the field shall be injected or incorporated within 24 hours after the application or equivalent conservation practices must be installed and maintained on the field pursuant to USDA-NRCS practice standards; and
 - 7) if nitrogen-based application cannot be conducted in accordance with this subsection (c), then phosphorus-based application must be conducted as specified in subsection (d).
- d) Phosphorus-based application of livestock waste must be conducted consistent with the following requirements:
- 1) livestock waste must be applied consistent with the setback requirements in Section 502.645;
 - 2) the livestock waste application rate must not exceed the annual agronomic nitrogen demand of the next crop grown as provided in Section 502.625(a);
 - 3) if the soil contains greater than 50 pounds of available soil phosphorus per acre (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), phosphorus-based application rates must maintain or lower the soil test phosphorus ~~be neutral~~ during the nutrient management plan period;
 - 4) if the soil contains greater than 300 pounds of available soil phosphorus per acre (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), the amount of phosphorus applied in the livestock waste must not exceed the amount of phosphorus removed by the next year's crop grown and harvested; and
 - 5) livestock waste shall not be applied to fields with available soil phosphorus (median Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200) greater than 400 pounds per acre.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.620 Protocols to Land Apply Livestock Waste

- a) Livestock wastes shall not be applied to waters of the United States. Livestock waste application shall not cause runoff to waters of the United States during non-

precipitation events. Livestock waste application shall not occur on land that is saturated at the time of application. Livestock waste shall not be applied onto land with ponded water.

- b) Discharge of livestock waste to waters of the United States or off-site during dry weather through subsurface drains is prohibited.
- c) Livestock waste shall not be applied during precipitation when runoff of livestock waste will be produced.
- d) Surface land application of livestock waste shall not occur within 24 hours preceding a forecast of 0.5 inches or more of precipitation in a 24-hour period as measured in liquid form. The CAFO owner or operator shall use one of the following two methods for determining whether these conditions exist and shall maintain a record of the forecast from the source used.

- 1) A prediction of a 60 percent or greater chance of 0.5 inches or more of precipitation in a 24-hour period as measured in liquid form, obtained from the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910 for the location nearest to the land application area; or

BOARD NOTE: The prediction in subsection (d)(1) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/>.

- 2) A prediction of 0.5 inches or more of precipitation in a 24 hour period as measured in liquid form and identified as higher than Quantitative Precipitation Forecast (QPF) category 3, obtained from the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring, MD 20910 for the land application area location.

BOARD NOTE: The prediction in subsection (d)(2) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm>

- e) Determination of soil loss must be made for each field using Revised Universal Soil Loss Equation 2 (RUSLE2).

BOARD NOTE: Soil loss may be calculated ~~determined~~ using the RUSLE2 software program available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm. Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington, DC 20250 (202) 720-3656.

- f) Surface land application may be used when the land slope is no greater than 5% or when the yearly average soil loss calculated using RUSLE2 is equal to or less than 5 tons per acre per year or Erosion Factor T, whichever is less, regardless of slope. Injection or incorporation within 24 hours shall be used when the land slope is greater than 5% and the yearly average soil loss calculated using RUSLE2 is greater than 5 tons per acre per year or Erosion Factor T, whichever is less. Fields with varying or steep slopes must be divided into separate areas for calculating yearly average soil loss using RUSLE2 to comply with this subsection.

BOARD NOTE: Soil loss may be calculated ~~determined~~ using the RUSLE2 software program available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm and Additional information on RUSLE2 may be obtained from the United States Department of Agriculture, Agricultural Research Services, 1400 Independence Avenue, S.W., Washington, DC 20250 (202) 720-3656. Erosion Factor T for Illinois soils is available from the ~~USDA~~ United States Department of Agriculture Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign, IL 61821 (217) 353-6676. ~~Service's~~ The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov> ~~http://soils.usda.gov/survey/printed_surveys/state.asp?state=Illinois&abbr=IL.~~

- g) Land application of livestock waste is prohibited on slopes greater than 15%.
- h) Liquid livestock waste shall not be applied to land with less than 36 inches of soil covering fractured bedrock, sand or gravel. The depth of soil cover may be determined by using NRCS soil surveys, Illinois State Geological Survey well logs, or soil probes.
- i) Livestock waste shall not be applied to bedrock outcrops.
- j) Livestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when there is less than 60 inches of unconsolidated material over bedrock. The depth of unconsolidated material may be determined by using NRCS surveys, Illinois State Geological Survey well logs, or soil probes.
- k) Livestock waste shall be applied at no greater than 50 percent of the agronomic nitrogen rate determined pursuant to Section 502.625 when the minimum soil depth to seasonal high water table is less than or equal to 2 feet. The depth of soil to seasonal high water table may be determined by using information from NRCS soil surveys, soil probes, and water table levels from Illinois State Geological Survey well log data or well points.

- l) Livestock waste shall not be applied at rates that exceed the infiltration rates of the soil.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.625 Determination of Livestock Waste Application Rates

- a) Livestock waste application shall not exceed the agronomic nitrogen rate, which is defined as the annual application rate of nitrogen that can be expected to be required for a realistic crop yield goal. Multi-year phosphorus application is allowed when the application is specified in a nutrient management plan and meets the requirements in Section 502.615. Any such application must be consistent with nutrient management plan requirements. The agronomic rate must be determined in a manner consistent with this Section and Section 502.615.
- b) Livestock Waste Volumes. The estimate of the annual volume of available livestock waste for application shall be obtained by multiplying the number of animals constituting the maximum design capacity of the facility by the appropriate amount of waste generated by the animals. For purposes of this Section, “maximum design capacity” means the maximum number of animals that can be housed at any time for a minimum of 45 days at a CAFO. The following sources may be used to obtain the amount of waste generated:
- 1) Livestock Waste Facilities Handbook, Third Edition, Table 2-1, incorporated by reference at 35 Ill. Adm. Code 501.200(a);
 - 2) 35 Ill. Adm. Code 560.Table 1;
 - 3) Manure Characteristics, 2nd ed., 2004 (MWPS-18 Section 1), MidWest Plan Service, incorporated by reference at 35 Ill. Adm. Code 501.200(a); and
 - 4) NRCS Agricultural Waste Management Field Handbook Chapter 4, incorporated by reference at 35 Ill. Adm. Code 501.200(a); and
 - ~~5) ASABE Standard Data ASAE D384.2 MAR 2005 (R2010);~~
- c) Nutrient Value of Livestock Waste. For new livestock facilities that have not generated livestock waste, the owner or operator must prepare a plan based on an average of the minimum and maximum numbers in the table values derived from Livestock Waste Facilities Handbook, Third Edition, Table 2-1, 10-6, or 10-7, or Manure Characteristics, incorporated by reference at 35 Ill. Adm. Code 501.200, or 35 Ill. Adm. Code 560.Table 1 or Table 2. If “as produced” or “as excreted” nutrient values are used, the nitrogen value shall be adjusted to account for losses due to the type of storage system utilized using an average of the ranges in Livestock Waste Facilities Handbook, Third Edition, Table 10-1. Other sources

of nutrient values may be used if approved by the Agency. Owners or operators of existing livestock facilities, must prepare the plan based on representative sampling and analysis of the livestock waste generated by the CAFOs in accordance with Section 502.635(b).

- d) Adjustments to Nitrogen Availability. Adjustments shall be made to nitrogen availability to account for the following:
- 1) Nitrogen loss from livestock waste due to method of application, based on an average of the ranges in Livestock Waste Facilities Handbook, Third Edition, Table 10-2; and
 - 2) The first-year mineralization of organic nitrogen into a plant available form, as obtained from Livestock Waste Facilities Handbook, Third Edition, Table 10-5.
- e) Realistic Crop Yield Goal
- 1) The realistic crop yield goal shall be determined for each field where the livestock waste is to be land applied. The realistic crop yield goal shall be determined using an average yield over a five-year period from the field where livestock waste is to be land applied. The source of data to be utilized to determine the realistic crop yield goal is provided in subsection (e)(2).
 - 2) Whenever five years of data is available for the field where livestock waste is to be land applied, proven yields shall be used in calculating the realistic crop yield, unless there is an agronomic basis for predicting a different realistic crop yield goal. The owner or operator shall indicate the method used to determine the proven yield. Data from years with crop disasters may be discarded.
 - A) If five years of proven yield data is not available for the field where the livestock waste is to be land applied, or if an agronomic basis exists for predicting a different realistic crop yield goal, the owner or operator may calculate the realistic crop yield goal using crop insurance yields or Farm Service Agency USDA yields. If either of these sources is used, a copy of the insurance or assigned crop yields shall be included with the nutrient management plan.
 - B) If data is not available on proven yields, crop insurance yields or Farm Service Agency yields, or if an agronomic basis exists for predicting a different realistic crop yield goal, soils based yield data from the University of Illinois “Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils; Bulletin No. 810” (Bulletin 810) or “Optimum Crop Productivity Ratings for Illinois

Soils; Bulletin 811” (Bulletin 811), incorporated by reference at 35 Ill. Adm. Code 501.200, shall be used by the owner or operator to calculate the realistic crop yield goal pursuant to subsection (e)(1).

- i) If Bulletin 810 or 811 is used to calculate the realistic crop yield goal, a soil map of the land application areas shall be included in the nutrient management plan.
- ii) If Bulletin 810 or 811 is used, the realistic crop yield goal shall be determined by a weighted average of the soil interpretation yield estimates for the fields where livestock waste is to be land applied.
- iii) If Bulletin 811 is used, the owner or operator shall demonstrate in the nutrient management plan that the operational management and field conditions of the facility and land application areas meet the requirements for optimum conditions as provided in Bulletin 811.

f) Nitrogen Credits

- 1) Nitrogen credits shall be calculated by the CAFO owner or operator, pursuant to Section 502.505(n)(7), for nitrogen-producing crops grown the previous year, for other sources of nitrogen applied for the growing season, and for mineralized organic nitrogen in livestock waste applied during the previous three years.
- 2) Nitrogen credits shall be calculated by the CAFO owner or operator for the mineralized organic nitrogen in livestock waste applied during the previous three years at the rate of 50%, 25%, and 12.5%, respectively, of that mineralized during the first year.

g) Phosphorus. The plan shall be developed or amended by the CAFO owner or operator to determine the maximum livestock waste application rate for each field. The plan for that field shall contain the following:

- 1) The phosphorus content of the livestock waste shall be determined in accordance with subsection (c);
- 2) The realistic crop yield goal of each crop in the field, obtained pursuant to subsection (e)(1);
- 3) The phosphorus amount needed for each crop in the planned crop rotation, expressed as P₂O₅, obtained from the Illinois Agronomy Handbook, 24th Edition, incorporated by reference at 35 Ill. Adm. Code 501.200. The determination of this phosphorus amount shall be based on the realistic

crop yield goal for each planned crop and the soil test for available phosphorus (Bray P1 or Mehlich 3 in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200);

- 4) The phosphorus carryover from previous years' application of phosphorus or livestock waste;
 - 5) Soil test phosphorus results for that field; and
 - 6) The maximum livestock waste application rate, consistent with nitrogen-based or phosphorus-based applications allowed under Section 502.615.
- h) Nitrogen and phosphorus fertilization rates for the realistic crop yield goal may be obtained from the Illinois Agronomy Handbook, 24th Edition, incorporated by reference at 35 Ill. Adm. Code 501.200, or 35 Ill. Adm. Code 560.Appendix A.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.630 Protocols to Land Apply Livestock Waste During Winter

- a) Winter Application Prohibition. Surface land application of livestock waste on frozen, ice-covered, or snow-covered ground is prohibited except as specified in subsection (a)(1) of this Section.
 - 1) Notwithstanding the winter application prohibition in subsection (a) of this Section, ~~surface~~Surface land application of livestock waste on frozen, ice covered or snow covered ground is allowed if all of the following conditions are met~~prohibited, unless~~:
 - A) No practical alternative measures are available to handle the livestock waste within storage facilities or to dispose of the livestock waste at other sites. Examples of practical alternative measures may include, but are not limited to, the transfer of waste to another waste handling facility or sewage treatment plant, rental or acquisition of a storage tank, reduction of herd size or depopulation, and protection of the facility from direct precipitation and clean stormwater runoff;
 - B) Liquid livestock waste cannot be injected or incorporated within 24 hours of application due to soil conditions;
 - C) Prior to December 1, the owner or operator has taken steps to provide 120 days of available storage capacity of manure storage areas. Examples of steps that could be taken may include, but are not limited to, land application of livestock waste, transfer of waste

to another party, protection of waste storage structures from direct precipitation and stormwater runoff, and depopulating facilities to reduce the amount of waste generated;

- D) The owner or operator has complied with subsection (a)(1)(C) and yet the storage volume available on December 1 of that winter season is less than 120 days of storage;
- E) The owner or operator has notified the Agency in writing on December 1 of that winter season that the CAFO has less than 120 days storage available; and
- F) The discharge of livestock waste from the structure to the surface waters is expected to occur due to shortage in storage capacity.

2) The storage volume calculation in subsection (a)(1)(C) must include runoff and direct precipitation plus the volume of livestock excreta, wash water and other process wastewater generated and expected to enter the storage structure during the period of December 1 to April 1. Runoff volume calculations must meet the following requirements:

- A) Runoff calculations must be based on the runoff transferred into the storage structure under frozen ground conditions;
- B) Direct precipitation that will reduce the available storage volume must be based on normal precipitation for the December 1 to April 1 period for the nearest weather station and, for facilities exposed to precipitation, the 25-year, 24-hour storm event volume or the design storm event volume determined under Subpart H for swine, poultry and veal large CAFOs that are new sources. The determination of normal precipitation shall be based on National Weather Service or State Water Survey Records;

BOARD NOTE: The following sources may be used to determine normal precipitation:

<http://www.isws.illinois.edu/atmos/statecli/newnormals/newnormals.htm> or <http://cdo.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl>.

- C) The owner or operator shall keep a record of the precipitation value used and the source from which the value was obtained; and
- D) Calculations must allow for a freeboard of two feet.

- 3) In the event winter land application is necessary, it must be conducted pursuant to a winter application plan described in subsection (b) and according to the conditions of subsection (c).

b) Winter Application Plan

In order to conduct surface land application on frozen, ice covered, or snow covered ground, the requirements of this subsection (b) must be met.

- 1) No land application may occur within ¼ mile of a non-farm residence.
- 2) No discharge may occur during land application of livestock waste.
- 3) Surface land application on frozen ground shall not occur within 24-hours preceding a forecast of 0.25 inches or more of precipitation in a 24-hour period as measured in liquid form. The CAFO owner or operator shall use one of the following two methods for determining whether these conditions exist and shall maintain a record of the forecast from the source used.

- A) A prediction of a 60 percent or greater chance of 0.25 inches or more of precipitation in a 24-hour period as measured in liquid form, obtained from the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch 1325 East West Highway, Silver Spring MD 20910, for the location nearest to the land application area; or

BOARD NOTE: The prediction in subsection (b)(3)(A) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/>.

- B) A prediction of 0.25 inches or more of precipitation in a 24-hour period as measured in liquid form and identified as higher than QPF category 2 obtained from the National Weather Service Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910, for the land application area location.

BOARD NOTE: The prediction in subsection (b)(3)(B) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm>.

- 4) Surface land application of livestock waste on ice covered or snow covered land shall not occur within 24 hours preceding a forecast of 0.1 inches or more of precipitation in a 24 hour period as measured in liquid form. The CAFO owner or operator shall use one of the two methods

provided below for determining whether or not these conditions exist and shall maintain a record of the forecast from the source used.

- A) A prediction of a 60 percent or greater chance of 0.1 inches or more of precipitation in a 24-hour period as measured in liquid form obtained from the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910 for the location nearest to the land application area; or

BOARD NOTE: The prediction in subsection (b)(4)(A) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/>.

- B) A prediction of 0.1 inches or more of precipitation in a 24-hour period as measured in liquid form and identified as higher than QPF category 1 obtained from the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910 for the land application area location.

BOARD NOTE: The prediction in subsection (b)(4)(B) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm>.

- 5) If the land application of livestock waste is on ice covered or snow covered land, surface land application shall not occur when the predicted high temperature exceeds 32 degrees F on the day of land application or on any of the 7 days following land application as predicted by the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910 for the location nearest to the land application area. The owner or operator shall maintain a record of the forecast from the source used.

BOARD NOTE: The predicted high temperature in subsection (b)(5) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/forecast/graphics/MEX/index.html> or <http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm>.

- 6) If the surface land application of livestock waste is on ice covered or snow covered land, the CAFO owner or operator shall visually monitor for runoff from the site. The CAFO owner or operator must monitor each ice covered or snow covered field where land application has been conducted daily when the ambient temperature is 32 degrees F or greater following winter land application until all the ice or snow melts from the land application area.

7) If the surface land application of livestock waste is on ice covered or snow covered land and a runoff from the land application area occurs, the CAFO owner or operator shall report any discharge of livestock waste within 24 hours after the discovery of the discharge as follows:

- A) The report shall be made to the Agency through the Illinois Emergency Management Agency by calling 1-800-782-7860 or 1-217-782-7860;
- B) Within 5 days after this telephone report, the CAFO owner or operator shall file a written report with the Agency that includes the name and telephone number of the person filing the report, location of the discharge, an estimate of the quantity of the discharge, time and duration of the discharge, actions taken in response to the discharge, and observations of the condition of the discharge with regards to turbidity, color, foaming, floatable solids and other deleterious conditions of the runoff for each day of each runoff event until the ice or snow melts off the site.

c) Availability of Individual Fields for Winter Application

If livestock waste is to be surface applied on frozen ground, ice covered land or snow covered land, the land application may only be conducted on land that meets the following requirements:

- 1) Adequate erosion and runoff control practices exist, including, but not limited to, vegetative fence rows around the site, contour farming, terracing, catchment basins and buffer areas that intercept surface runoff from the site;
- 2) A crop stubble, crop residue or vegetative buffer of 200 feet exists between the land application area and surface waters, waterways, open tile line intake structures, sinkholes, agricultural wellheads, or other conduits to surface water and the vegetative buffer zone is down gradient of the livestock waste application area;
- 3) Application on land with slopes greater than 5% is prohibited;
- 4) Application may only occur on sites that have field specific soil erosion loss calculated using Revised Universal Soil Loss Equation less than Erosion Factor T, and have a median Bray P1 or Mehlich 3 soil level of phosphorus, in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200, equal to or less than 300 pounds per acre;

BOARD NOTE: Soil loss may be calculated using the Revised Universal Soil Loss Equation 2 (RUSLE2) software program available at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm, and Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington, DC 20250 (202) 720-3656. Erosion Factor T for Illinois soils is available from the ~~USDA-NRCS's~~ United States Department of Agriculture Natural Resource Conservation Service, Illinois Office, 2118 W. Park Court, Champaign, IL 61821 (217) 353-6676. The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov> at ~~http://soils.usda.gov/survey/printed_surveys/state.asp?state=Illinois&abbr=IL~~.

- 5) Surface application may only occur if the setbacks equal three times the otherwise applicable setbacks by Sections 502.615 and 502.645 if the slope of the field is between 2 percent and 5 percent. This setback requirement does not include the quarter mile distance from residences contained in Section 502.645(a); and
- 6) For fields with slopes of less than 2 percent, the surface application may only occur if the setbacks equal two times the otherwise applicable setbacks required by Sections 502.615 and 502.645. This setback requirement does not include the quarter mile distance from residences contained in Section 502.645(a).

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.635 Manure and Soil Sampling and Analysis

- a) Soil Phosphorus Sampling. Soil samples shall be obtained and analyzed from each field of the land application area where applications are planned. Fields where livestock waste is applied shall be sampled twice for each field during the term of the permit. Soil testing must be conducted as follows:
 - 1) Soil sampling for phosphorus shall be in accordance with the sampling protocols in Chapter 8 of the Illinois Agronomy Handbook, 24th Edition, incorporated by reference at 35 Ill. Adm. Code 501.200. Laboratory analysis for soil phosphorus (Bray P1 or Mehlich 3) shall be in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference at 35 Ill. Adm. Code 501.200;
 - 2) Soil samples shall be at the same time in the cropping cycle and rotation so that results are comparable year to year; and

- 3) The two required soil samples for each field must be taken at least one year apart.
- b) Manure Sampling.
- 1) The CAFO owner or operator shall annually obtain a laboratory analysis of the nutrient content representative of the livestock waste to be land applied as provided within the nutrient management plan. Livestock waste shall be sampled during the application process. Multiple subsamples shall be obtained and combined into one sample so that a representative sample is obtained for analysis. Results of a sample taken during waste application the previous year can be used for plan preparation unless there has been a change in the waste management practices during the year. The analytical results of livestock waste samples shall be used for calculation of the application rate allowed by the NPDES permit.
- 2) The laboratory analysis of the livestock waste sample shall include total kjeldahl nitrogen, ammonia or ammonium nitrogen, total phosphorus, total potassium, and percent total solids. The nutrient results shall be reported on the laboratory analysis sheet on a lb/ton or mg/kg dry weight basis or lb/1000 gal or mg/L wet weight basis. The results of these analyses are to be used in determining application rates for livestock waste.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.640 Inspection of Land Application Equipment for Leaks

- a) For all permitted CAFOs that land apply livestock waste, the CAFO owner or operator must periodically inspect equipment used for land application of livestock waste for leaks or problems that result in improper operation.
- b) The CAFO owner or operator must ensure that the land application equipment is properly calibrated for application of livestock waste on a routine basis.
- c) Calibration procedures and schedules shall be described for all equipment in the CAFO's nutrient management plan.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.645 Land Application Setback Requirements

- a) Distance from Residences

Livestock waste shall not be land applied within ¼ mile of any residence not part of the CAFO, unless it is injected or incorporated on the day of application.

- b) Setbacks from Waters
- 1) Livestock waste shall not be land applied within 200 feet of surface water, unless the water is upgrade or there is adequate diking, which includes, but is not limited to, diking that prevents runoff from the land application from entering surface waters that are within 200 feet of the land application area.
 - 2) Livestock waste shall not be land applied within 100 feet of down gradient open subsurface drainage intakes, agricultural drainage wells, sinkholes, grassed waterways or other conduits to surface waters, unless a 35 foot vegetative buffer exists between the land application area and the grassed waterways, open subsurface drainage intakes, agricultural drainage wells, sinkholes or other conduits to surface water.
 - 3) The setback requirements in subsection (b)(2) do not apply if the CAFO is able to demonstrate to the Agency that a setback or buffer is not necessary because implementation of alternative conservation practices (including, but not limited to, injection and incorporation) or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions that would be achieved by the 100-foot setback.
- c) Livestock waste shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.
- d) Livestock waste shall not be land applied to waters of the United States, grassed waterways or other conduits to surface waters.
- e) Livestock waste shall not be land applied within ~~150~~200 feet of potable water supply wells.

(Source: Added at 38 Ill. Reg. _____, effective _____)

SUBPART G: ADDITIONAL LIVESTOCK WASTE DISCHARGE LIMITATIONS

Section 502.710 New Source Performance Standards for Dairy Cows and Cattle Other Than Veal Calves

- a) New Source Performance Standards (NSPS) Applicability

Any CAFO with the capacity to stable or confine 700 or more mature dairy cows, whether milked or dry, or 1,000 or more cattle other than mature dairy cows or veal calves that is a new source must achieve the livestock waste discharge limitations representing the application of NSPS as of the date of permit coverage or within the timelines provided in Section 502.303.

- b) The livestock waste discharge limitations representing NSPS for the CAFO production area for CAFOs subject to this Section are the livestock waste discharge limitations found in Sections 502.605 and 502.610.
- c) The livestock waste discharge limitations representing NSPS for the CAFO land application area are the livestock waste discharge limitations and requirements found in Sections 502.615 through 502.645.
- d) CAFOs subject to this Section shall attain the limitations and requirements in Subpart F as of the date of permit coverage or within the timelines provided in Section 502.303.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.720 Horse and Sheep CAFOs: BPT, BAT and NSPS

This Section contains the effluent limitations applicable to discharges resulting from the production area at horse and sheep CAFOs. CAFOs subject to this Section shall attain the limitations and requirements of this Section as of the date of permit coverage. CAFOs with the capacity to stable or confine fewer than 10,000 sheep or fewer than 500 horses are exempt from these effluent limitations.

- a) Effluent Limitations Attainable by the Application of the Best Practicable Control Technology Currently Available (BPT) for Horse and Sheep CAFOs
 - 1) Except as provided in subsection (a)(2), any existing point source subject to this Section shall have no discharge of process wastewater pollutants to waters of the United States. Achievement of no process wastewater discharge to waters of the United States is the effluent limitation representing the application of BPT for horse and sheep CAFOs.
 - 2) Process waste pollutants in the overflow may be discharged to waters of the United States whenever rainfall events, either chronic or catastrophic, cause an overflow of process waste water from a facility designed, constructed and operated to contain all process generated wastewaters plus the runoff from a 10-year, 24-hour rainfall event for the location of the point source.
- b) Effluent Limitations Attainable by the Application of the Best Available Technology Economically Achievable (BAT) for Horse and Sheep CAFOs
 - 1) Except when the provisions of subsection (b)(2) apply, any existing point source subject to this Section shall have no discharge of process wastewater pollutants to waters of the United States. Achievement of no process wastewater discharge to waters of the United States is the effluent

limitation representing the application of BAT for Horse and Sheep CAFOs.

- 2) Whenever rainfall events cause an overflow of process wastewater from a facility designed, constructed, operated and maintained to contain all process-generated wastewaters plus the runoff from a 25-year, 24-hour rainfall event at the location of the point source, any process wastewater pollutants in the overflow may be discharged to waters of the United States.
- c) New Source Performance Standards (NSPS) for Horse and Sheep CAFOs
Except as provided in subsection (b)(2), any new source subject to this Section shall have no discharge of process wastewater pollutants to waters of the United States. Achievement of no process wastewater discharge to waters of the United States is the performance standard representing NSPS for horse and sheep CAFOs.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.730 Duck CAFOs: BPT and NSPS

This Section contains the effluent limitations applicable to discharges resulting from the production areas at dry lot and wet lot duck CAFOs. CAFOs subject to this Section shall attain the limitations and requirements of this Section as of the date of permit coverage. CAFOs with the capacity to stable or confine fewer than 5,000 ducks are exempt from these effluent limitations.

- a) Effluent Limitations Attainable by the Application of the Best Practicable Control Technology Currently Available (BPT) for Wet Lot and Dry Lot Duck CAFOs
- Any existing point source subject to this Section shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of BPT:
- 1) BOD₅ is limited to a maximum daily limit of 3.66 pounds/1,000 ducks or 1.66 kg/1,000 ducks.
- 2) BOD₅ is limited to a maximum monthly average of 2.0 pounds/1,000 ducks or 0.91 kg/1,000 ducks.
- 3) Fecal coliform is not to exceed the most probable number (MPN) of 400/100 ml at any time.
- b) New Source Performance Standards for Wet Lot and Dry Lot Duck CAFOs

- 1) Except as provided in subsection (b)(2), any new source subject to this Section shall have no discharge of process wastewater pollutants to waters of the United States. Achievement of no process wastewater discharge to waters of the United States is the performance standard representing NSPS for duck CAFOs.
- 2) Whenever rainfall events cause an overflow of process wastewater from a facility designed, constructed, operated and maintained to contain all process-generated wastewaters plus the runoff from a 25-year, 24-hour rainfall event at the location of the point source, any process wastewater pollutants in the overflow may be discharged to waters of the United States.

(Source: Added at 38 Ill. Reg. _____, effective _____)

**SUBPART H: NEW SOURCE PERFORMANCE STANDARDS FOR
NEW SWINE, POULTRY AND VEAL LARGE CAFOS**

Section 502.800 Applicability

- a) This Subpart applies to all new swine, poultry and veal CAFOs with the capacity to stable or confine the numbers of animals of the types provided for in the definition of large CAFOs in Section 502.103.
- b) The requirements of this Subpart H are in addition to the livestock waste discharge limitations and technical standards in Subpart F, except Section 502.605.
- c) The limitations and requirements of this Subpart must be attained as of the date of NPDES permit coverage or within the timelines provided in Section 502.303.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.810 Production Area Requirements

There must be no discharge of livestock waste pollutants to waters of the United States from the production area unless the CAFO complies with the alternative livestock waste discharge limitations provided in Section 502.830.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.820 Land Application Area Requirements

For CAFOs subject to this Subpart, the land application areas shall attain the same limitations and requirements as specified in Sections 502.615 through 502.645.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.830 Alternative Best Management Practice Livestock Waste Discharge Limitations

- a) Any CAFO subject to this Subpart may request that the Agency establish NPDES permit best management practice (BMP) livestock waste discharge limitations designed to ensure no discharge of livestock waste based upon a site-specific evaluation of the CAFO's open surface livestock storage structure.
- b) The NPDES permit BMP livestock waste discharge limitations must address the CAFO's entire production area. In the case of any CAFO using an open surface livestock waste storage structure for which the Agency establishes such livestock waste discharge limitations, "no discharge of livestock waste pollutants," as used in this Subpart H, means that the storage structure is designed, operated, and maintained in accordance with BMP established by the Agency on a site-specific basis after a technical evaluation of the storage structure.
- c) The technical evaluation must address the elements listed in Section 502.840.

(Source: Added at 38 Ill. Reg. _____, effective _____)

Section 502.840 Technical Evaluation

All technical evaluations conducted pursuant to this Subpart H must address the minimum elements contained in this Section. Waste management and storage facilities designed, constructed, operated, and maintained consistent with the analysis conducted in subsections (a) through (g) and operated in accordance with the additional measures and records required by Section 502.610 will fulfill the requirements of this Subpart.

- a) Information to be used in the design of the open manure storage structure including, but not limited to:
 - 1) Minimum storage periods for rainy seasons;
 - 2) Additional minimum capacity for chronic rainfalls;
 - 3) Applicable technical standards that prohibit or otherwise limit land application on frozen, saturated or snow-covered ground found in Section 502.630;
 - 4) Planned emptying and dewatering schedules consistent with the CAFO's nutrient management plan;
 - 5) Additional storage capacity for livestock waste intended to be transferred to another recipient at a later time; and

- 6) Any other factors that would affect the sizing of the structure.
- b) The design of the open livestock waste storage structure as determined in accordance with 40 C.F.R. 412.46(a)(1)(ii) ~~the USDA National Resource Conservation Service's Agricultural Waste Management Field Handbook~~, incorporated by reference at 35 Ill. Adm. Code 501.200, or equivalent design software or procedures approved by the Agency.

BOARD NOTE: The NRCS's Animal Waste Management (AWM) ~~waste management~~ software specified under 40 CFR 412.46(a)(1)(ii) is available at <http://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/technical/alphabeticall/mmm/?&cid=st1prdb1045812> and includes procedures and calculation based on the ~~Agricultural Waste Management Field Handbook~~ for design of open livestock ~~waste storage units~~. Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington, DC 20250, Telephone (202) 720-3656.

- c) All inputs used in the open livestock waste storage structure design, including:
- 1) actual climate data for the previous 30 years, consisting of historical average monthly precipitation and evaporation values;
 - 2) the number and types of animals;
 - 3) anticipated animal sizes or weights;
 - 4) any added water and bedding;
 - 5) any other process wastewater; and
 - 6) the size and condition of outside areas exposed to rainfall and contributing runoff to the open livestock waste storage structure.
- d) The planned minimum period of storage in months, including, but not limited to, the factors for designing an open livestock waste storage structure described in subsection (a). Alternatively the CAFO may determine the minimum period of storage by specifying times the storage pond will be emptied consistent with the CAFO's nutrient management plan.
- e) Site-specific predicted design specifications, including:
- 1) dimensions of the storage facility;
 - 2) daily manure and wastewater additions;

- 3) the size and characteristics of the land application areas; and
 - 4) the total calculated storage period in months.
- f) An evaluation of the adequacy of the designed manure storage structure in accordance with 40 CFR 412.46(a)(1)(vi) ~~using simulation procedures in the USDA Natural Resources Conservation Services Agricultural Waste Management Field Handbook~~, incorporated by reference at 35 Ill. Adm. Code 501.200.
- 1) The evaluation must include all inputs used in the simulation, including but not limited to:
 - A) daily precipitation, temperature, and evaporation data for the previous 100 years;
 - B) user-specified soil profiles representative of the CAFO's land application areas;
 - C) planned crop rotations consistent with the CAFO's nutrient management plan; and
 - D) the final modeled result of no overflows from the designed open livestock waste storage structure.
 - 2) For those CAFOs where 100 years of local weather data for the CAFO's location is not available, CAFOs may use a simulation with a confidence interval analysis conducted over a period of 100 years.
 - 3) The adequacy of the designed manure storage structure may be evaluated using equivalent evaluation and simulation procedures approved by the Agency.

~~BOARD NOTE: The adequacy of the designed manure storage structure may be evaluated by using the most recent version of the Soil Plant Air Water (SPAW) Hydrology Tool specified at 40 CFR 412.46(a)(1)(vi) is available found at <http://hydrolab.arsusda.gov/SPAW/Index.htm>. Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington, DC 20250, Telephone (202) 720-3656.~~
- g) The Agency may waive the requirement in subsection (f) for a site-specific evaluation of the designed livestock waste storage structure and instead authorize a CAFO to use a technical evaluation developed for a class of specific facilities within a specified geographical area.

- h) The Agency may request additional information to support a request for livestock waste discharge limitations based on a site-specific open surface livestock waste storage structure.

(Source: Added at 38 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE E: AGRICULTURE RELATED POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 504
IMPLEMENTATION PROGRAM (REPEALED)

SOURCE: Repealed at 38 Ill. Reg. _____, effective _____.

IT IS SO ORDERED.

I, John T. Therriault, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on April 17, 2014, by a vote of 4-0.



John T. Therriault, Clerk
Illinois Pollution Control Board