

United States Department of Agriculture



Natural Resources Conservation Service  
2118 West Park Court  
Champaign, Illinois 61821  
(217) 353-6600

www.il.nrcs.usda.gov

PC#3050

**SUBJECT:** Comments Regarding Rulemaking R12-23  
Concentrated Animal Feeding Operations:  
Proposed Rule (Second Notice) to 35 ILL. ADM. CODE PARTS 501, 502, and 504

**DATE:** May 16, 2014

**TO:** Illinois Joint Committee on Administrative Rules  
ATTN: Deb Connolly, Rules Analyst  
700 Stratton Building, Springfield, IL 62706

In reviewing the second notice amendments to the subject regulations, Illinois NRCS submits the following comments and concerns.

- Section 501.200(a) and 502.510. NRCS previously suggested that the Board consider the use of the current Illinois NRCS Nutrient Management Practice Standard (Practice Code 590) in the development of nutrient management plans, and add a reference to the NRCS 590 Standard in these sections. This suggestion was not followed, primarily for lack of information. So, NRCS is providing relevant information and details with this letter, to be used for further consideration.

The NRCS Nutrient Management Standard (590) is national in scope and underwent a very rigorous national process of development, including significant research to back up the requirements of the standard. In Illinois, NRCS and partners undertook a rigorous effort in 2012-2013, where all interested stakeholders, including environmental groups, livestock groups, and regulatory agencies, participated in development of the standard to meet Illinois specific requirements and conditions. IEPA was a major contributor in the process, and concurred with the criteria in the standard prior to finalization. During this process, the provisions for land application of manure that previously existed in NRCS Conservation Practice Standard 633 – Waste Utilization were incorporated into the new 590 standard, and 633 was decommissioned from the purpose of using manure as a source of crop nutrients.

In March 1999, NRCS and USEPA released a “Unified National Strategy for Animal Feeding Operations” that would support the development of Comprehensive Nutrient Management Plans. Since that time, NRCS has worked to develop very detailed information on the development and implementation of Comprehensive Nutrient Management Plans, and has provided significant financial and technical assistance to individual livestock producers to create and implement their plans. With this letter, NRCS is providing for reference a copy of the NRCS/EPA Unified National Strategy, Nutrient Management Practice Standard, and the Illinois Phosphorus Index and Nitrogen Management Guidelines. Of note, NRCS is required to incorporate all applicable state and local requirements into the Conservation Practice Standards. For example, all elements of the current Illinois Livestock Management Facilities Act (LMFA) have been incorporated into the current 590 standard. NRCS also adheres to nutrient management decisions made by the Illinois Pollution Control Board in relation to any assistance that NRCS provides to clients who are subject to the rule. NRCS suggests that the Board work closely with NRCS to assure that land application guidelines contained in the Illinois NRCS Nutrient Management Practice Standard (Practice Code 590) are consistent with regulations, and build upon the significant stakeholder effort that has yielded the current standard and supporting tools, including the phosphorus index and nitrogen management guidelines which are described further in comments related to Section 502.615(a).

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- Section 501.244 Erosion Factor T. NRCS is in agreement with the updated definition presented. However, the telephone number for NRCS-Illinois is incorrect as it appears in this section and other locations throughout the document. Please correct the telephone number to: (217) 353-6600, or delete the number altogether. In addition, NRCS recommends that language throughout the document use the term "Soil Loss Tolerance Factor (T Factor)" as it is referred to by NRCS documents, rather than "Erosion Factor T".
- Section 501.360 Revised Universal Soil Loss Equation. NRCS agrees with the changes the Board has proposed with the exception of striking the word "water". It is correct that RUSLE2 is used to estimate "water" erosion, specifically sheet and rill erosion rather than any other forms of erosion (i.e. wind, ephemeral gully, gully, or streambank). NRCS recommends that the word "water" be added back or that the more correct term, "sheet and rill" be used to describe the erosion calculated by RUSLE2. NRCS commends the Board for making this change throughout the document.
- Section 501.404(d) Runoff Field Application Systems. With this letter, NRCS is providing literature to demonstrate the well-established technology which has successfully been used to direct concentrated silage leachate to a pipe for transport to a proper storage facility, while allowing leachate diluted by large rainfall runoff to pass to the Runoff Field Application area for treatment. NRCS continues to recommend allowing the runoff field application system to be used to treat dilute runoff from feedstock, serving to reduce containment and land application costs for small producers who do not have covered feed storage areas. The attached literature provides examples for reference:
  - Wright et al., 2004. "Effectiveness of Silage Leachate Treatment with Vegetative Filter Areas", American Society of Agricultural Engineers (ASAE) Paper Number 042178.
  - Bellows et al., 2000. "Silage Storage", Agricultural Environmental Management Reference Sheet series, Cornell University Cooperative Extension, Ithaca, NY.
- Section 502.615(a) Field Assessment/Nutrient Transport Potential. NRCS suggests that the Board reconsider adoption and use of newly developed tools in the Dec 2013 update to the Illinois NRCS 590 standard. New tools consist of the Illinois Phosphorus Index and Illinois Nitrogen Management Guidelines. These tools are attached with this letter and are available in Section IV of the Illinois NRCS Field Office Technical Guide. The Illinois eFOTG site can be found at: [http://efotg.sc.egov.usda.gov/efotg\\_locator.aspx?map=](http://efotg.sc.egov.usda.gov/efotg_locator.aspx?map=). The Phosphorus Index is a tool used to assess the potential for phosphorus to move from agricultural fields to surface water. It was originally developed in the early 1990's by Dr. Jerry Lemunyon (NRCS, Ft. Worth Texas) and has since been validated by both NRCS and land grant universities in numerous states. NRCS has been required to tailor this tool for use in each state. It is a methodology that assesses the individual conditions in each field (i.e. sheet and rill erosion, ephemeral erosion, distance to water, soil test levels, application rates and practices) and rates the potential for loss as low, medium, or high. Once the initial assessment is completed, site specific practices that will reduce the potential for loss can then be prescribed and implemented. Manure application can then be allowed at N rates, P rates, or not allowed at all based on a rating of low, medium, or high. The nitrogen management guidelines are similar in that field/crop conditions are listed and appropriate nitrogen management practices are required to be implemented that will limit nitrogen losses.
- Section 502.615(d)(3) Phosphorus-Based Application. NRCS disagrees with the requirement that only phosphorus based nutrient applications may be done on soils containing greater than 50 lbs/ac of available phosphorus. The threshold level or method should instead be based on scientifically valid environmental factors.

Land grant universities have established well researched recommendations for adequate soil test phosphorus levels for crop production. These optimum soil test values are established based on both crop phosphorus needs as well as the probability of economical crop yield response to applied phosphorus fertilizer. The main point of this type of research was to determine the economic tradeoff



between purchased fertilizer application and crop yields. Since manure is typically available to the farmer at little or no cost, the economic tradeoff presented in the agronomic guidance for purchased (inorganic) fertilizer does not apply. Furthermore, environmental science has not been a factor in the recommendations.

Focusing on environmental research into sustainable nutrient application will yield a more reasonable threshold for land application of manure nutrients. Until the early 1980's, the scientific consensus was that phosphorus does not leach significantly and losses from the surface of the soil was primarily attached to eroded soil particles, so as long as sheet and rill erosion is controlled, the phosphorus will remain in place. Since then, however, significant research has been done on the movement of phosphorus. As phosphorus levels increase in the soil, studies now show that phosphorus can begin to move downward in the soil profile and some phosphorus can be lost in solution in the runoff water. The criteria set by LMFA regulations for allowance of nitrogen based manure applications up to 300 lbs. P/ac was based on studies presented in the Livestock and Poultry Environmental Stewardship (LPES) Curriculum, Lesson 34 (attached). An example of the results is included below, for ease of reference, showing that the threshold for leaching of phosphorus occurs at approximately 200 mg/kg (400 lb/ac). Additional information can be found in the attached document "Determining environmentally sound soil phosphorus levels", Sharpley A., Daniel T.C., Sims J.T., Pote D.H., (1996) Journal of Soil and Water Conservation. 51(2). Pp. 160-166. Thus, a more reasonable threshold for phosphorus-based application would be 300 lb/ac as presented in the LMFA.

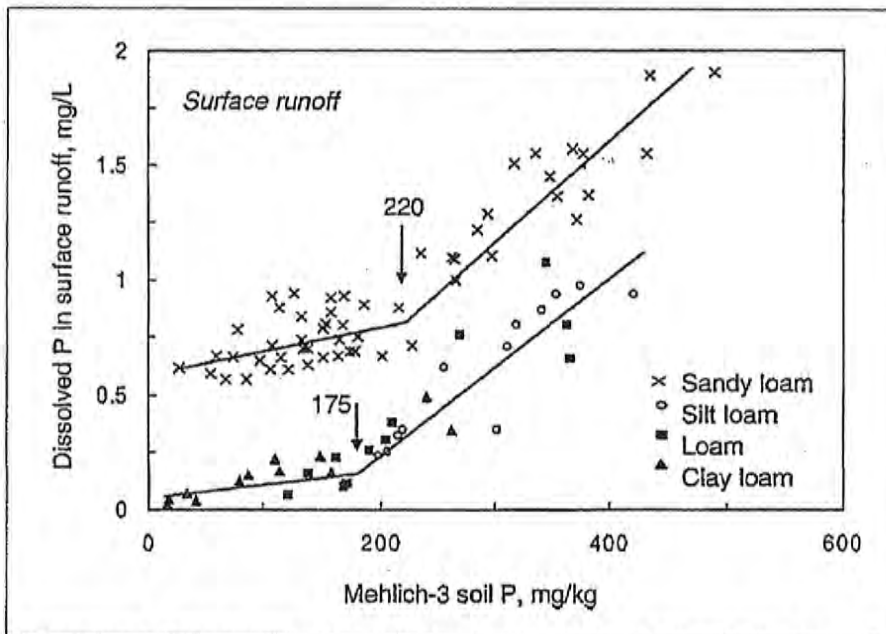


Figure 34-12. Relationship between the concentration of dissolved P in surface runoff and Mehlich-3 extractable soil P concentration of surface soil (0-2 inch depth) from a central PA watershed.

Soil test phosphorus is not the only factor involved in the risk of phosphorus loss in the landscape. Other site specific factors must be considered, which form the basis for the Illinois Phosphorus Index. Using a phosphorus index is a more valid, scientifically accurate and risk based way to plan manure applications than merely relying on soil test levels alone.



- Section 502.620(f) Protocols To Land Apply Livestock Waste. NRCS appreciates the consideration given to the content of Agronomy Technical Note IL-3, available in Section 1 of the Illinois NRCS Field Office Technical Guide. Soil type boundaries are seldom abrupt in the landscape; therefore, differentially managing the application of manure for multiple soils in a field is not practical particularly with solid manure spreaders. Calculation of multiple dominant critical slopes within an individual field is neither necessary nor practical in most cases. The dominant critical soil concept is a way to represent the most dominant critical eroding area within an entire field. Erosion is then calculated on this area and control practices are designed to protect the most dominant critical area of the field, thus protection on the most critical areas will assure protection on the entire field. Any areas where ephemeral gullies or other runoff channels exist should then be addressed through practices such as grassed waterways, terraces, or water and sediment control basins. Ephemeral gully control is addressed in the NRCS Illinois Phosphorus Index. NRCS procedure only requires a single dominant critical soil and associated T Factor to be established for each field. NRCS procedure does not contain any reference to 50 to 100 percent as noted by the Agency. The procedure calls for the determination of percent slope to be made with a clinometer or Abney level on the mid 50-100 feet of the slope. NRCS requests the board utilize the methodology established in the attached Agronomy Technical Note IL-3.
- Section 502.620(g) Protocols to Land Apply Livestock Waste. NRCS agrees with the board that application of manure on slopes greater than 15% has a high risk for runoff. NRCS is willing to reconsider this provision in the 590 standard. However, NRCS believes that some allowance should be made for manure applications on land that is in permanent cover and the manure is injected or surface applied when the soil is dry (below 50% available water holding capacity) and there is less than a 50% chance of precipitation within 5 days of application.
- Sections 502.620(h), (j) and (k) Protocols To Land Apply Livestock Waste. Clarification has been added as to an acceptable protocol for delineating locations where the soil cover over fractured bedrock, sand or gravel is less than 36 inches, where there is less than 60 inches of unconsolidated material over bedrock, and where the depth to seasonal high water table is less than or equal to 2 feet. NRCS agrees with the language to allow the depth to be determined using NRCS soil surveys, ISGS well drilling logs, or soil probes. NRCS recommends adding language to explain that a single well drilling log or soil probe is an acceptable representation of the soil cover of the field.
- Section 502.620(k) Protocols To Land Apply Livestock Waste. This section specifies a reduced application rate where the minimum soil depth to seasonal high water table is less than or equal to 2 feet. A large proportion of the soils in Southern Illinois fall into this category (as well as many in other parts of the state). This provision will significantly affect producers especially in Southern Illinois, requiring them to have access to essentially double the amount of land on which to spread manure. Recognizing that the seasonal high water table only occurs during a small portion of the year, NRCS suggests that the restriction should apply only to manure applications during the winter and early spring, rather than all year long. This would reduce the burden on producers in southern Illinois.
- Section 502.630 (a)(1)(B) Protocols To Land Apply Livestock Waste During Winter. NRCS agrees with the changes made to clarify the intent of (a)(1)(B) and appreciates the Board's consideration of this request.
- Section 502.635 Manure and Soil Sampling and Analysis. NRCS continues to suggest that the regulation adopt similar requirements for the laboratories that do soil/manure testing, as outlined in the Dec 2013 Illinois NRCS 590 standard. These guidelines are to assure that the laboratories performing the testing are following established guidelines and that their testing methods give consistent results. Requiring lab certification for NPDES permits would serve to benefit both NRCS, IEPA, and the Board in getting labs to step up to this higher level of data assurance.



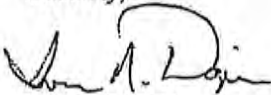
The Board has expressed concern about the number of labs that can do this work. NRCS has worked specifically with the Illinois Soil Testing Association (ISTA) to develop a program in Illinois that will meet NRCS requirements. ISTA agreed to develop a program that would meet NRCS requirements (ISTA-LAP) and currently has 17 labs that are certified, with more being encouraged to become certified. The list can be found at: <http://www.soiltesting.org/5certifiedlabs.html>. NRCS also allows lab certification through the national NAPT-PAP program. There are currently 3 labs that provide or could provide service to Illinois that are on this list.

As for manure testing, the number of labs currently certified is limited. However, establishing this criterion would serve to get labs to step up to this higher level of data assurance. NRCS proposes that lab certification be required and that labs be notified of the new requirement and given a limited grace period in which they would be allowed to become certified to participate in manure testing for NPDES permits. Also, the number of manure samples required is low compared to the number of soil samples. Costs for shipping and analyzing manure samples to a location in Illinois are the same as for more distant locations, and are also relatively inexpensive. A requirement for lab certification would not pose an economic burden to the producers of Illinois.

Regardless of whether or not the Board decides to make this a requirement for NPDES permits, the NRCS requirement for lab certification is a national requirement and will not change. Given that NRCS clients also typically are governed by the NPDES permit regulations, consistency between the regulation and the NRCS requirements will minimize confusion.

Thank you for the opportunity to comment.

Sincerely,



Ivan N. Dozier  
State Conservationist

Cc: Ruth Book, State Conservation Engineer  
Kerry Goodrich, State Resource Conservationist  
Ron Collman, State Soil Scientist

Attachments:

NRCS/EPA Unified National Strategy (1999)  
Illinois NRCS Conservation Practice Standard 590 – Nutrient Management  
Illinois Phosphorus Index  
Illinois Nitrogen Management Guidelines  
High Risk N Leaching Soils map and list  
Effectiveness of Silage Leachate Treatment with Vegetative Filter Areas (2004)  
Silage Storage (2000)  
Livestock and Poultry Environmental Stewardship (LPES) Curriculum, Lesson 34  
Determining Environmentally Sound Soil P Levels (1996)  
NRCS Agronomy Technical Note IL-3

PC#3051

J C A R

MAY 07 2014

ILLINOIS  
GENERAL ASSEMBLY

May 7, 2014

Joint Committee on Administrative Rules  
700 Stratton Office Building  
Springfield, IL 62706

**Re: Rulemaking on 35 Ill. Adm. Code Parts 501, 502, and 504 (Concentrated Animal Feeding Operations)**

Dear Joint Committee on Administrative Rules:

The undersigned organizations urge the Joint Committee on Administrative Rules (JCAR) to approve the proposed amendments to the state environmental rules on concentrated animal feeding operations (CAFOs). The JCAR office has accepted the Second Notice for rulemaking on 35 Ill. Adm. Code Parts 501, 502, and 504 from the Illinois Pollution Control Board (IPCB). The rulemaking is scheduled to be considered by JCAR on May 20, 2014.

The U.S. Environmental Protection Agency (USEPA) has delegated authority to the Illinois Environmental Protection Agency (IEPA) to administer the CAFO permitting program. This program and its associated rules are required under the federal Clean Water Act and subject to federal oversight. The current rulemaking is in part a response to the USEPA's 2010 determination that Illinois' "NPDES program for CAFOs does not meet minimum thresholds for an adequate program."<sup>1</sup>

We support the proposed amendments in the Second Notice because we have concerns about the environmental impacts of CAFOs. Every year, several fish kills are caused by discharges of livestock waste from CAFOs and IEPA inspectors find environmental violations at approximately half of the facilities inspected.<sup>2</sup> The Office of the Illinois Attorney General has handled dozens of cases against CAFOs for discharges to state waters. Since livestock operations are becoming larger, sometimes managing 10 million gallons of waste annually, it is imperative to update the rules to ensure all this waste is properly managed.

The proposed amendments are a welcome improvement to Illinois' current CAFO rules and are consistent with the federal CAFO rules. The proposal reflects the findings of scientific studies on the environmental fate of livestock waste from CAFOs. The proposal also addresses some of the most commonly found problems at livestock production areas and land application fields. The proposal requires CAFOs to use best management practices that will lessen the likelihood of livestock waste entering and polluting Illinois' rivers and lakes.

The proposed amendments to the CAFO rules reflect a multi-year, multi-stakeholder effort that began in 2009 when the IEPA assembled the CAFO Rulemaking Stakeholder Workgroup. Workgroup members included representatives of government agencies, the agricultural sector,

<sup>1</sup> Region 5 United States Environmental Protection Agency. Initial Results of an Informal Investigation of the National Pollutant Discharge Elimination System Program for Concentrated Animal Feeding Operations in the State of Illinois. September 2010.

<sup>2</sup> <http://www.epa.state.il.us/water/cafo/reports/index.html>



and the environmental sector (including signatories of this letter). The workgroup met several times to discuss specific aspects of the rule and the IEPA incorporated stakeholder comments into its rule drafts. The IEPA submitted its proposed rule to the IPCB in 2012, and later that year there were five public hearings on the rule. During these hearings, the stakeholders again had a chance to provide input on the rule. The IEPA, four agricultural associations and three environmental groups participated throughout by writing testimony, presenting experts, and answering questions posed by IPCB staff. When the IPCB came out with its First Notice for rulemaking in 2013, the stakeholders yet again had the chance to comment. Comments were extensive and the IPCB responded to those comments and asked clarifying questions. Over 2,900 citizens wrote comments in support of the proposed amendments.

The IPCB, as well as agricultural economist Dr. John Ikerd (public comment #16), found that the proposal is technically feasible and economically reasonable. We believe the proposed amendments reflect a fair balance between environmental and economic considerations that were expressed during an inclusive, multi-year rulemaking process. Thank you for your consideration and we look forward to seeing the new rules in place soon.

Sincerely,

Stacy James, Ph.D., Water Resources  
Scientist  
Prairie Rivers Network

Jessica Dexter, Attorney  
Environmental Law & Policy Center

Danielle Diamond, Attorney  
Illinois Citizens for Clean Air & Water  
Socially Responsible Agriculture Project

Jennifer Walling, Executive Director  
Illinois Environmental Council

John Rumpler, Senior Attorney  
Environment Illinois

Jessica Fujan, Midwest Organizer  
Food and Water Watch

Cindy Skrukud, Ph.D., Clean Water  
Advocate  
Sierra Club, Illinois Chapter

Wes King, Executive Director  
Illinois Stewardship Alliance

Matthew Alschuler, President  
Helping Others Maintain Environmental  
Standards

Loka Ashwood, President  
Rural Residents for Responsible Agriculture

Cc:

Co-Chairman Senator Don Harmon  
Co-Chairman Representative  
Timothy Schmitz  
Senator Pamela Althoff  
Senator Tony Muñoz  
Senator Sue Rezin  
Senator Dale A. Righter

Senator Ira Silverstein  
Representative Gregory Harris  
Representative Louis I. Lang  
Representative David L. Leitch  
Representative Donald L. Moffitt  
Representative André Thapedi

PC#3052

**Illinois Farm Bureau, Illinois Pork Producers Association, Illinois Milk Producers Association and Illinois Beef Association (collectively the Agricultural Coalition) Concerns Regarding the Illinois Pollution Control Board's Second Notice Opinion and Order, In the Matter of: Concentrated Animal Feeding Operations (CAFOs): Proposed Amendments to 35 Ill. Adm. Code parts 501, 502, and 504 (R 2012-023)**

**Seeking Prohibition**

**Section 501.505 Registration/Reporting**

- Why do we want this to be prohibited?
  - The Illinois Pollution Control Board (IPCB or Board) does not have the authority to require this proposed requirement.
  - The proposed requirement is not required by federal rule.
    - USEPA withdrew the proposed reporting rule in July 2012 because it felt it was more appropriate to obtain the information from existing sources (working with states, USDA, USGS and other federal partners). USEPA also reasoned that states have longstanding relationships with owners and operators of livestock operations, and that those relationships facilitate information sharing. USEPA stated its belief that collecting existing information, evaluating it, and compiling it in one format would better inform USEPA regarding what additional information may be needed and the best way to collect that information if necessary. (77 Fed. Reg. 42679 (July 20, 2012)).
  - The proposed requirement is not required by state law.
    - IEPA concluded that the Illinois Environmental Protection Act does not give the Board authority to adopt regulations establishing a CAFO registration/reporting program, nor does it give IEPA the authority to implement such a requirement. IEPA also concluded there is no implied authority of either IEPA or the Board for this proposed requirement.
  - Illinois EPA has indicated it does not want, nor does it need, a reporting rule. Illinois EPA has its own system in place to handle identification and inspection of these facilities and is working closely with USEPA to prove progress on the issue.
  - This is an environmental group request. We believe it is a fishing expedition for environmental groups to sue/harass farmers.
  - This is unduly burdensome for Illinois farmers. Only entities required to obtain permits should have to conform to the regulations to provide information.
- *We are asking for language as initially proposed by Illinois EPA. It is what Illinois EPA wants and is consistent with the federal rule. The original Illinois EPA proposal would create a placeholder for if and when USEPA were to require it:*
  - 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 or 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.

#### Asking for JCAR to Object

##### 502.510(b)(13) Visual Inspection of Tile Lines

- We believe the following language should be included (from our First Notice Comment):  
The 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.
- Why do we want these changes:
  - Manure applications that are conducted at appropriate rates in appropriate soil conditions are not likely to encroach on saturated soil near tile depths; nonetheless, site-specific evaluations as proposed by the Board may be warranted in certain instances.
  - Visual inspection of tile inlets and outlets is reasonable in many cases.
  - However, visual inspection of subsurface drainage system components other than the inlets and outlets, prior to manure application, may be impossible (e.g. if application is over a standing crop that prevents an observer seeing the soil surface) or inconclusive (application is through or over a heavy layer of crop residue).
  - For a field where drain tiles were installed many years ago, the actual presence of a subsurface drainage system may be undocumented.
  - There may be no maps or other records of the tile locations, other than the physical presence of tile inlets and outlets.
  - The absence of this mapping is relevant to proposed Section 502.510(b)(13) and, to a lesser extent, the Board's proposed information requirements set forth for Nutrient Management Plans in Section 502.505(g).
  - Further, in addition to being unknown, existing subsurface drainage systems may not have exposed tile inlets at the soil surface.
  - With no clues in the field identifying these structures, it may be virtually impossible for a person to comply with the requirement as proposed by the Board.

##### 502.615(a)(10) Field Assessment of Drain Tiles

- We believe the following language should be included (from our First Notice Comment):  
10) Subsurface drainage tiles, where evidence of location is available.
- Why do we want these changes:
  - Manure applications that are conducted at appropriate rates in appropriate soil conditions are not likely to encroach on saturated soil near tile depths; nonetheless, site-specific evaluations as proposed by the Board may be warranted in certain instances.
  - Visual inspection of tile inlets and outlets is reasonable in many cases.



- However, visual inspection of subsurface drainage system components other than the inlets and outlets, prior to manure application, may be impossible (e.g. if application is over a standing crop that prevents an observer seeing the soil surface) or inconclusive (application is through or over a heavy layer of crop residue).
- For a field where drain tiles were installed many years ago, the actual presence of a subsurface drainage system may be undocumented.
- There may be no maps or other records of the tile locations, other than the physical presence of tile inlets and outlets.
- The absence of this mapping is relevant to proposed Section 502.510(b)(13) and, to a lesser extent, the Board's proposed information requirements set forth for Nutrient Management Plans in Section 502.505(g).
- Further, in addition to being unknown, existing subsurface drainage systems may not have exposed tile inlets at the soil surface.
- With no clues in the field identifying these structures, it may be virtually impossible for a person to comply with the requirement as proposed by the Board.

502.615(c)(6) Nitrogen Based Application and 502.645(b)(1) – 200 ft from surface waters

- We believe we can clarify the intent and eliminate conflicting requirements by deleting the following section (502.615(c)(6)) and then amending 502.645(c)(1):

~~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; and~~

502.645(b) Setbacks from Waters

1) Livestock waste shall not be land applied within 200 feet of surface water, unless the water is upgrade, the livestock waste applied to the field shall be injected or incorporated within 24 hours of the application, 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.

502.615(d)(3) Phosphorus Based Application

- We believe the following language should be included:
  - 3) if the soil contains greater than ~~50 pounds~~ the agronomic optimum of available soil phosphorus ~~per acre~~ (median Bray P1 or Mehlich 3 in accordance with the Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in Section 501.200)), ~~phosphorus based application rates must be neutral during~~ phosphorus should be applied at rates calculated to maintain or lower the phosphorus soil test over the nutrient management plan period;
- Why do we want these changes:
  - Different parts of the state have different phosphorus supplying power (optimum for corn/soy ranges from 50 to 70 pounds) and different crops appear to have different optimum phosphorus soil test levels, as evidenced by the UI IL Agronomy Handbook. Wheat and alfalfa, for instance, continue to show a yield response at higher phosphorus soil test levels. So by being prescriptive to the point of a single number, the Board assumes knowledge of all agronomic considerations in the state to the exclusion of published historical, research-based recommendations.



- In addition, weather volatility will likely impact the actual amount of nutrients left in the soil, either through excessive rain or droughts. Accordingly, a farmer could be impacted by this through no fault of his own even though he had planned to either keep the phosphorous level neutral or lower.
- We are not asking to raise the level of phosphorous levels in the soil, but we are asking that the language be reflective of a plan that a farmer is responsible for rather than the weather.

#### 502.620(f) Protocols to Land Apply Waste

- We believe the following language should be included:  
Surface 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.
- Why do we want this language?
  - The Board's language makes this section confusing. How should the field be divided? Should it be divided evenly?
  - This would require technical service providers or NRCS staff to re-evaluate the fields and make judgments on how to divide them up.
  - RUSLE2 is not really set up for this.
  - Running the model on a broken-up field will quickly turn into a tail-chasing exercise for the purpose of getting a number that you like--with a list of required practices that no one can implement.
  - Thus the reason for "dominant critical soil type"--picking the risky soil type that occurs in a large enough portion of the field that the entire field can reasonably be managed as one unit.
  - The "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.
  - However, the Board's proposed provision, as cited above, essentially employs the RUSLE2 calculation for the purpose of predicting phosphorus transport from the field, while the RUSLE2 calculation is recognized only as a pointwise soil erosion model.
  - It was not the intent of the developers of the RUSLE2 for the model to be used for the purpose used in proposed Section 502.620(f).
  - In order for the RUSLE2 calculation to be of reasonable utility in this context, 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.

#### 502.620(g) Application on Slopes

- We want this language: To delete the language: "land application of livestock is prohibited on slopes greater than 15%."
- Why do we want this deleted?



- The Illinois NRCS 590 Standard allows land application of livestock waste on slopes greater than 15% if injection or incorporation is used.
- The prohibition that appears to be expressed in proposed Section 502.620(g) (prohibiting application of all livestock waste on slopes greater than 15% under any application protocol) is inconsistent with other standards in the state.
- Moreover, the proposed prohibition on land application on slopes greater than 15% is not supported by record evidence and will unduly limit land application that is environmentally protective.
- Since the provision relies on the RUSLE2 calculation to determine which methods may be used for land application of livestock waste, and since impacts of such land application methods are already embodied in the RUSLE2 model, this provision should be deleted.
- While a more comprehensive set of factors already accepted by the Board via RUSLE2 in other parts of the proposed rules may limit or prohibit such applications, they do so in a context that is more consistent with the intent of RUSLE2.

#### 502.620(h) Depth over Fractured Bedrock

- We want this language as originally proposed by Illinois EPA: “liquid livestock waste not be applied to land with less than 10 inches of soil covering fractured bedrock, sand or gravel.”
- Why do we want this?
  - The Board’s approach is overly conservative at 36 inches.
  - The Board’s proposed rule extends the rule to many areas in Illinois that would be prohibited from land application, with no scientific justification.
  - The proposed conditions will eliminate many areas for potential manure spreading within Illinois, with little environmental benefit.
  - The Board’s reliance on the Wisconsin report is not technically sound, resulting in a rule proposal that is inappropriate for land application requirements in Illinois.
  - The Report was specific to a very discreet 5-county area in Northeast Wisconsin.
  - None of the Report’s recommendations have been incorporated into Wisconsin regulations, even though the regulations were promulgated subsequent to the Report and, accordingly, the Wisconsin Department of Natural Resources can be presumed to have been aware of them.
  - The proposed depth restrictions will necessitate extensive field studies to assure the limits are not breached and are unnecessary to determine the suitability of land spreading areas.
  - Instead, the Board should retain the Illinois EPA’s original provisions as they are protective of the environment.

#### 502.620(j) Depth over Bedrock

- We want this language as originally proposed by Illinois EPA: “(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 20 inches of unconsolidated material over bedrock.”
- Why do we want this?
  - The Board’s approach is overly conservative at 60 inches.
  - The Board’s proposed rule extends the rule to many areas in Illinois that would be prohibited from land application, with no scientific justification.
  - The proposed conditions will eliminate many areas for potential manure spreading within Illinois, with little environmental benefit.



- The Board's reliance on the Wisconsin report is not technically sound, resulting in a rule proposal that is inappropriate for land application requirements in Illinois.
- The Report was specific to a very discreet 5-county area in Northeast Wisconsin.
- None of the Report's recommendations have been incorporated into Wisconsin regulations, even though the regulations were promulgated subsequent to the Report and, accordingly, the Wisconsin Department of Natural Resources can be presumed to have been aware of them.
- The proposed depth restrictions will necessitate extensive field studies to assure the limits are not breached and are unnecessary to determine the suitability of land spreading areas.
- Instead, the Board should retain the Illinois EPA's original provisions as they are protective of the environment.

**Request for JCAR to Ask Clarifying Questions on Regulatory Intent**

501.405(a), 502.500 and 502.600

- The Board changed language in 501.405(a) to "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 Board changed language in 502.500(a) and 502.600(b) to "Unpermitted large CAFOs claiming an agricultural stormwater exemption pursuant to 502.102 are not required to have a nutrient management plan but must comply with the requirements listed in Section 502.102(b) to qualify for the exemption."
- The Board's reasoning at p. 21 states that USEPA's explanation is "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 CFR 122.42(e)(viii)
- The Board's reasoning at p. 21 states that USEPA's explanation is "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 CFR 122.42(e)(viii) or follow other standards." USEPA further stated that facilities following other standards "may have to demonstrate both the appropriateness of alternative standards and that its practices conformed to them."
- We would request that JCAR ask the Agency its intent with this "other standards" language. The specific possible question: "For a farmer that does not have a permit to be compliant with this section, does he have to do everything outlined here or just meet the intent by providing records that support what they have done?"