BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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

NOTICE OF FILING

PLEASE TAKE NOTICE that I have filed today with the Illinois Pollution Control Board PREFILED ANSWERS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY to prefiled questions posed by the Illinois Pollution Control Board, the Illinois Agricultural Coalitions, and the Environmental Groups, for the above-captioned proceeding, a copy of which is herewith served upon you.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: _____
Joanne M. Olson
Assistant Counsel
Division of Legal Counsel

DATED: August 13, 2012

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THIS FILING IS SUBMITTED ON RECYCLED PAPER

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PREFILED ANSWERS OF THE
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

NOW COMES the ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, (Illinois EPA) by and through its counsel, and hereby submits its PREFILED ANSWERS as directed by the Hearing Officer Order dated March 22, 2012. In support therefore, the following statements are made:

1. On March 22, 2012, the Hearing Officer ordered the first hearing in the above captioned rulemaking to take place on August 21, 2012 to August 23, 2012. The Hearing Officer order contained the following prehearing schedule: prefiled testimony for this hearing was to be submitted by no later than June 19, 2012; prefiled questions were to be submitted no later than July 17, 2012; and prefiled answers must be submitted no later than August 14, 2012.

2. The Illinois EPA filed the testimony of Bruce Yurdin, Sanjay Sofat and Daniel Heacock on June 18, 2012.

3. On July 17, 2012, the Hearing Officer issued an order containing prefiled questions of the Illinois Pollution Control Board directed to the Illinois EPA.

4. The Illinois EPA's answers to the Illinois Pollution Control Board's questions are found in Attachment 1.

5. On July 17, 2012, The Illinois Agricultural Coalition, which includes the Illinois Pork Producers Association, Illinois Beef Association, Illinois Milk Produces Association and the Illinois Farm Bureau, filed questions directed to the Illinois EPA.

6. The Illinois EPA's answers to the Illinois Agricultural Coalition are found in Attachment 2.

7. On July 17, 2012, Prairie Rivers Network, Illinois Citizens for Clean Air and Water, Natural Resources Defense Council and Environmental Law & Policy Center (hereinafter "Environmental Groups") collectively filed questions directed to Sanjay Sofat, Bruce Yurdin and Daniel Heacock.

8. The Illinois EPA's answers to the Environmental Group's prefiled questions directed to Sanjay Sofat are found in Attachment 3. Attachment 3 also contains four additional documents, Attachment 6a, Attachment 6b, Attachment 7a and Attachment 7b.

9. The Illinois EPA's answer to the Environmental Group's prefiled questions directed to Bruce Yurdin are found in Attachment 4.

10. The Illinois EPA's answers to the prefiled questions directed to Daniel Heacock are found in Attachment 5.

Respectfully submitted,

ILLINOIS ENVIRONMENTAL
PROTECTION AGENCY

By: _____
Joanne M. Olson
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ILLINOIS EPA'S ANSWERS TO THE PREFILED QUESTIONS OF THE ILLINOIS POLLUTION CONTROL BOARD

Statement of Reasons (Section II: Facts in Support):

1. This section cites a document entitled "An Urgent Call to Action -- Report of the State-EPA Nutrient Innovations Task Group" (August 2009) that is not attached to the Statement of Reasons or listed as a Reference in the Agency's Technical Support Document. With its written response to questions, would the Agency submit a copy of this document into the record of this rulemaking?

This document is available on line at:
http://www.epa.state.il.us/water/nutrient/presentations/urgent_call_to_action.pdf
The Agency is willing to bring a copy of the document to the August 2012 hearings, and submit it into the record at that time.

2. This section also cites a draft water quality report and Section 303(d) list that also are not attached to the Statement of Reasons or listed as a Reference in the Agency's Technical Support Document. With its written response to questions, would the Agency submit a copy of this document into the record of this rulemaking?

This document is available on line at:
http://www.epa.state.il.us/water/tmdl/303-appendix/2010/122011-iwq-report-surface-water-303-list.pdf
The Agency is willing to bring a copy of the document to the August 2012 hearings, and submit it into the record at that time.

Technical Support Document:

3. In addressing this proposed amendment, the TSD appears to cite USEPA's NPDES Permit Writer's Guidance Manual from 2003. That manual is listed in the TSD as a "Reference" and in Attachment O as a document used to develop the proposal, but it is not now included in the Board's record. Can the Agency submit a copy of the document to the Board so it can be included in the record?

The Agency is willing to bring a copy of the 2003 document to the August 2012 CAFO hearings and submit it into the record at that time. The Agency would also note that this document was revised in February 2012 but this revision was not relied on by the Agency in developing its proposal.

ATTACHMENT 1
Answers to Prefiled Questions From Illinois Pollution Control Board

Yurdin Pre-Filed Testimony:

4. On page 2 of your pre-filed testimony, you note that the Agency does not issue permits for the design and construction of CAFOs. Does the Agency have any role in the design and construction of waste handling facilities at CAFOs?

The primary responsibility for the design and construction of waste handling facilities belongs to the Department of Agriculture. The Illinois EPA may be involved in the design and construction to ensure compliance with the Environmental Protection Act, Clean Water Act, and State or Federal Regulations.

5. On pages 6-7 of your pre-filed testimony, you indicate that unpermitted Large CAFOs are required to comply with NMP criteria in Section 502.510(b) because of their potential to produce more livestock waste, land apply more manure more frequently and have the greatest need to properly manage nutrient levels when they apply livestock waste. Please comment on whether the unpermitted medium CAFOs that stable or confine a number of animals close to the threshold specified in Section 502.104 pose similar concerns as large CAFOs. If so, comment on whether the Agency considered requiring unpermitted medium CAFOs also to comply with the NMP criteria.

A medium CAFO is defined not only by the number of animals but by circumstances deemed by the federal rule to be a discharge (animals have access to waterbody in production area or there is a man-made device taking wastewater from the production area to the waters of the United States). Medium CAFOs by definition have a discharge and therefore must be permitted. This permitting process includes submittal, review of and approval of the NMP. The Illinois EPA did not consider special provisions for medium CAFOs (since they must seek permits and NMP approval as part of their permits).

6. On page 7 of your pre-filed testimony, you refer to excluding large unpermitted CAFOs from Section 502.405(a). Can you clarify that reference, which is not part of the existing rules or the Agency's proposal?

The reference to Section 502.405(a) appears to be a typo. The actual reference should have been to Section 501.405(a).

7. On page 8 of your [pre-filed] testimony, you note that one of the changes concerning CAFO designation updates the term "navigable waters" to "waters of the United States". Please explain the implications, if any, of this change.

When the federal CAFO rule was first promulgated, the term "navigable waters" was used to encompass those waters which were subject to the requirements of the

Clean Water Act, or jurisdictional waters. The federal rule has changed "navigable waters" to waters of the United States to refer to jurisdictional waters. Illinois EPA's proposal makes this same change to ensure consistency with the federal rule. As both "navigable waters" and "waters of the United States" refer to the same jurisdictional waters under the CWA, there will be no implication from this change.

Sofat Pre-Filed Testimony

8. On page 3 of your pre-filed testimony, you state that Subpart G sets forth the NSPS for large dairy cow and cattle CAFOs and Subpart H specifies NSPS for new large swine, poultry and veal CAFOs. Please clarify whether new and existing dairy cow, cattle and veal calves CAFOs not covered under Subparts G and H are subject to the waste discharge limitations and technical standards of Subpart F pursuant to Section 502.600.

Yes, they are.

9. On page 4 of your pre-filed testimony, you state that the Agency chose to develop one set of technical standards that were protective of surface waters, regardless of the size of the livestock facility. Please explain the rationale for not extending the proposed technical standards to unpermitted facilities, particularly unpermitted medium and small CAFOs which may have the same impact as the permitted facilities.

As explained in Response 5 above, medium CAFOs by definition must have a discharge, and all CAFOs that have a discharge must be permitted. Similarly, for an AFO to be a small CAFO, it must be designated so by the Agency. Section 502.106 provides the basis under which the Agency may require small CAFOs to obtain a permit. Under the Agency's proposal, medium CAFOs and small CAFOs that are required to obtain a permit will thus be subject to the requirements of Subpart F.

10. On page 6 of your pre-file[d] testimony, you note that, "[i]n the absence of a phosphorus index ("P-Index") like those used by other states to quantify nutrient potential, the Agency's proposal in Section 502.615 depends on several site-specific physical factors and conservation practices to address the issue of nutrient transport from a field to waters of the U.S." Please identify 'other states" that rely on a P-Index. In addition, please explain why a P-Index is not available for Illinois fields. Also, please comment on whether proposed site-specific procedures provide a better estimate of nutrient transport potential than the P-Index.

In many states where a phosphorus index has been developed, the United States Department of Agriculture –National Resource Conservation Service and the state land grant university develop a phosphorus index for the state, which was then adopted into the CAFO technical standards or CAFO NPDES permits. Neither the USDA-NRCS nor the University of Illinois have developed a phosphorus Index for Illinois. P indexes for other states are

developed for the soils and conditions in those states and are not applicable to Illinois. Therefore, the Agency does not have information regarding whether the site specific procedures proposed in Section 502.615 provide a better estimate of nutrient transport than P-indexes for the various states. The Agency reviewed the proposed CAFO regulations and permits for USEPA Region 5 states and a few other livestock producing states. Of those states, the following use a P index to determine application rates and practices for land application of livestock waste from permitted CAFOs: Iowa, Wisconsin, Kentucky, Ohio, Minnesota, Missouri, Oregon, Colorado and North Carolina. The following states do not have a P-index in their permitted CAFO technical standards but use other methods to assess for phosphorus at land application sites: Indiana and Michigan. Several of the states listed having screening criteria to determine if the P-index must be used. Indiana and Michigan have screening criteria to determine if indexes must be used for assessing manure, nutrient or sediment transport from the fields.

11. On page 7 of your pre-filed testimony, you state that other neighboring states also do not prohibit land application of livestock waste on frozen, ice-covered or snow-covered ground. Please comment on whether any Midwestern states prohibit winter application of livestock waste.

The Agency researched the states surrounding Illinois (Indiana, Iowa, Kentucky, Missouri, and Wisconsin) as well as other USEPA R5 states (Ohio, Minnesota, and Michigan) to find out if any of these states prohibit winter application of livestock waste. The Agency's understanding is that only Missouri and Kentucky prohibit the application of livestock waste on frozen or snow covered land.

12. On page 7 of your pre-filed testimony, you note that the Agency's proposal to allow winter application under emergency situations is based on the consideration of factors that minimize the risks posed by such application. Please comment on whether a CAFO needs to keep records of winter application, other than the weather forecast information under subsections 502.630(b)(3-5), to show compliance with the winter application plan requirements at Section 502.630(b) and (c).

Section 502.320(w)(1) through (9) requires a variety of records to be maintained for each land application. These recordkeeping requirements also apply to winter application. In addition, Section 502.630(a)(2)(D) requires the CAFO to keep records of the precipitation value and source used to calculate normal precipitation.

Section 501.200(a) Incorporation by Reference:

13. The proposed incorporation of Bulletin 811 - or Attachment W to the Agency's original proposal - notes a revision on January 15 without referring to a year. Since it appears that the revision occurred in 2011, would it clarify the incorporation to include a reference to that year?

Yes. The incorporation should be clarified by adding the year.

Section 501.238 Concentrated Animal Feeding Operation (CAFO):

14. The federal definition of CAFO at 40 C.F.R. § 122.23(b)(2) includes language consistent with the Agency's proposed definition, but the federal definition also includes language providing that [t]wo or more AFOs under common ownership are considered to be a single AFO for the purposes of determining the number of animals at an operation, if they adjoin each other or if they use a common area or system for the disposal of wastes."

However, language similar to this is now included as subsection (b) of the definition of "AFO" at Section 501.225. Does the Agency have any comment on this difference between its proposal and the federal definitions?

The language that the Board quotes above explains how to count the number of animals at AFOs. Initially, when the federal rules were adopted in 1970s, the federal definition of AFO included language virtually identically to the language the Board now points out. Shortly after the federal rule was adopted, the Board included this language in the definition of AFO in section 501.222. In preparing its regulatory proposal, the Agency did not see a need to modify the definition of AFO by moving the language from the AFO definition to the CAFO definition. Such a change is not necessary and would not have a substantive affect on the proposed rule.

Section 501.244 Erosion Factor T:

15. The proposed definition and the Technical Support Document at page 61 both refer to U.S. Department of Agriculture soil surveys, which list Erosion Factor T for soil types. Would the Agency comment on whether this survey should be incorporated by reference in Section 501.200?

On page 146 of the USDA-NRCS Piatt County Soil Survey a narrative definition of Erosion Factor T is provided which was used to provide the proposed definition of Erosion Factor T. The Erosion Factor T value is provided in table 19 of the Piatt County Soil Survey for each soil type in Piatt County. The Piatt County Soil Survey Erosion Factor T values are not applicable to other counties or other soil types. In reviewing this question we found that current county soil survey information with Erosion Factor T is

available at the USDA-NRCS Soil Data Mart website at http://soildatamart.nrcs.usda.gov/ **for all Illinois counties. For the above reasons, the Agency does not recommend incorporation by reference of the county specific soil survey. The Agency does not object to incorporation by reference the USDA-NRCS Soil Data Mart website.**

Section 501.390 25-Year, 24-Hour Precipitation Event:

Section 501.395 100-Year, 24-Hour Precipitation Event:

16. The proposed definitions refer to a National Oceanic and Atmospheric Administration Precipitation Frequency Atlas and the Web address at which it can be found. Would the Agency comment on whether this survey should be incorporated by reference in Section 501.200?

The Agency did not include this source in the list of incorporations by reference, because rather than being a single document that could be reproduced in hard copy, it is an electronic tool for determining the storm event values at a particular location which requires the user to input a particular location. The Agency would have no objection if the Board felt it was appropriate to include this source in the list of incorporations by reference.

Section 501.505 Requirements for Certain CAFOs to Submit Information:

17. Can the Agency report on whether USEPA took action on its proposal by July 2012 as expected? If so, would he Agency describe the reporting option chosen by USEPA? If not, can the Agency provide any update on the federal rulemaking that "co-proposed" two options for obtaining information from CAFOs? 76 Fed. Reg. 65431 (Oct. 21, 2011) (Att. G).

USEPA withdrew the proposed rule on July 20, 2012 (77 Fed. Reg. 42679 (July 20, 2012)).

18. At page 1 of the TSD and page 11 of Mr. Sofat's pre-field testimony, the Agency refers to this proposed section as a "place-holder." In the event that the timing of USEPA action allows it, does the Agency intend to address the federal rulemaking in, for example, a motion to amend its proposal or in post-hearing comments?

As explained above, U.S. EPA has withdrawn its proposed CAFO reporting rulemaking. At this time the Agency is not planning to amend its proposal to eliminate the placeholder language that was filed with the Board.

Section 502.101 NPDES Permits:

19. On page 40 of the Statement of Reasons, the Agency states that the "proposal does not require CAF[O]s that propose to discharge to obtain NPDES permit." Please clarify whether the rules require permits only for CAFOs with actual ongoing discharge.

The proposed rule requires CAFOs to obtain NPDES permit coverage if the CAFO discharges. Therefore, it is clear that a CAFO with an actual, ongoing discharge must obtain a permit. However, a CAFO with sporadic, intermittent discharge may be required to obtain a permit if the CAFO has not corrected the conditions that gave rise to the discharge and modified its design, construction, operation or maintenance in such a way to prevent a discharge from occurring in the future. See proposed section 502.101(b). This is consistent with the federal rule. The preamble to the 2008 federal rule explained that "CAFOs that have had intermittent or sporadic discharges in the past would generally be expected to have such discharges in the future, and therefore would be expected to obtain a permit, unless they have modified their design, construction, operation or maintenance in such a way as to prevent all discharges from occurring (73 Fed. Reg. 70423, (November 20, 2008)).

20. Please clarify whether the NPDES permit requirements apply to CAFOs that discharges regardless of their size, i.e. large, medium or small.

The NPDES permit requirements apply to CAFOs that discharge regardless of the size of the CAFO.

21. Subsection (b)(1) allows an owner or operator to not seek an NPDES permit for a past discharge "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." Please clarify whether the owner or operator must submit any documentation to show that issues concerning past discharges have been resolved in accordance with subsection (b)(1). Also, please comment on whether a permitted CAFO seeking not to renew its [permit] under subsection (d) must provide any documentation to the Agency to show that the CAFO will not discharge after the expiration of its permit.

Past discharges must be corrected and documentation provided to the Illinois EPA so that the Agency can make a determination that a permit may not be required. This is certainly the intent of Section 502.101(b)(1). Such documentation, probably submitted by the CAFO in the context of an enforcement action by the Agency, may involve correcting discharges from the production area or from the land application fields. The design,

construction and maintenance of the production area will need to be further explained and documentation of the cause and the appropriate remedy will be required. This may involve installation of new stormwater diversion structures or construction of new or repair of existing manure storage units. If the discharge was related to field application, the NMP may need to be revised and resubmitted to the Agency for review and approval. Similarly, when a CAFO is due to renew its permit, as provided under Section 502.101(d), it may seek to terminate its permit by providing appropriate documentation for any and all sources of wastewater discharge from its facility, noting any changes in operation, such as the number of animals present, and in the construction of any new wastewater facilities that have been added to the CAFO since the permit was last issued.

22. Subsection (b)(2) cites Section 12(f) of the Environmental Protection Act and provides 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." Please clarify whether this provision applies to only discharges to waters that are not waters of the United States, as noted at page 41 of the Statement of Reasons. If not, please provide examples of other situations where a discharge from a CAFO would not require an NPDES permit under the CWA.

This provision applies in all cases where a permit would not be required under the Clean Water Act. This includes instances where the discharge is to waters of the United States. An example is an agricultural stormwater discharge. A discharge will be considered an agricultural stormwater discharge if the discharge is a precipitation-related discharge from a field where the 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.

23. Subsection (c) requires an owner or operator of a CAFO that discharges to apply either [for] an individual NPDES permit or a general permit. Please explain the differences between the two types of permits.

An individual NPDES permit is issued to an individual permittee. A general permit is applicable to multiple permittees. An individual NPDES permit is issued with terms and conditions that are specific to the individual facility owner or operator. A general permit has terms and conditions that are developed for similar sources or facilities no matter where they are located. Individual facility owners or operators are issued coverage under the general permit either concurrent with or following issuance of the general permit.

Section 502.102 Land Application Discharges & Agricultural Stormwater:

24. Subsection (d) requires a CAFO to review nutrient management practices annually and update the nutrient management plan whenever there is change in the nutrient management practices. Please comment on whether this provision would be more appropriately placed under the NMP provisions of Subpart E. Also comment on whether the findings of the annual review should be included in the annual report under proposed Section 502.325.

The Illinois EPA has no objection to either suggestion.

Section 502.104 Medium CAFO:

25. According to the proposed definition, a CAFO is defined as a Medium CAFO if it has the specified number of animals stabled or confined and discharges pollutants into waters of the United States in accordance with subsections (b) or (c). Please comment on whether discharge of pollutants described in subsections (b) and (c) is different from the discharge of livestock waste to waters of the United States under Section 502.102(a).

Medium CAFOs are defined by size in Section 502.104(a) and further defined as having a discharge that is specified by type or cause in Sections 502.104(b) and (c), respectively. The agricultural stormwater discharge referred to in Section 502.102(a) is a discharge from land application that may occur when land application according to the NMP takes place but is then followed and caused by a storm event. This type of discharge is distinct from those that define a medium CAFO since those occur at the production area, not at the land application fields.

26. Please comment on whether the rules need to define "waters of the United State[s]."

The Illinois EPA does not believe that the rule needs to define waters of the United States. "Waters of United States" denotes waters over which the requirements in the Clean Water Act apply. While the federal rules define "waters of the United States," at 40 C.F.R. § 122.2 (2011), the Illinois EPA does not believe that the definition should be included in Part 501 because the federal definition does not reflect subsequent case law or guidance further defining the term.

Section 502.106 Case-by-Case Designation Requiring NPDES Permits:

27. Please explain under what circumstances an AFO would be designated as a "Medium CAFO" under Section 502.106.

If a facility meets the definition of an AFO (housing livestock for greater than 45 days, etc.), it may be designated a medium CAFO if it meets the size criteria in Section 502.104(a) and is a significant contributor of pollutants to waters of the United States, as may be documented by the Illinois EPA using

the five criteria in Section 502.106(a). In making this determination, the Agency must demonstrate that an actual discharge has occurred, given the various factors specified in that section.

28. Please comment on whether an Agency determination under this section is appealable to the Board

Agency designations under Section 502.106 are not directly appealable to the Board. After a permit has been issued, the facility can raise issues related to the designation to the Board in a permit appeal.

Section 502.202 Permit Application Submission:

29. Please clarify whether submission of "[a]ll permit applications" refers to application of General NPDES and Individual NPDES permits. Also, please clarify how the Agency will designate the address for submission of the permit application.

Section 502.202 applies to permit application submissions for the general or individual NPDES permit. The Agency will designate the address for mail, delivery or email using any or all the following: Illinois EPA website, the general permit, application forms or notice of intent forms. Instructions for these forms may also provide the designated addresses to be used.

Section 502.310 CAFOs Seeking Coverage Under NPDES General Permits:

30. Please clarify whether CAFOs seeking individual NPDES permits must comply only with the requirements of Section 502.201 and Part 309.

CAFOs seeking coverage under an individual permit or required to obtain coverage under an individual permit by the Agency would be obligated to follow all applicable provisions in Subtitle E and Part 309. Only Section 502.310 would not apply to these facilities.

31. Also, please clarify whether CAFOs seeking NPDES General Permits must meet the requirements of Section 502.310 in addition all of the requirements of Part 309 or only those provisions of Part 309 for which there are cross references in Section 502.310.

CAFOs seeking NPDES General Permits must meet the requirements of 502.310 and only those requirements of Part 309 specifically crossed referenced in that Section.

Section 502.320 Recordkeeping Requirements:

32. Please clarify whether unpermitted large CAFOs are subject to recordkeeping and annual reporting requirements. If not, please explain the rationale for not requiring such facilities to comply with some type of recordkeeping and reporting requirements.

The recordkeeping requirements of Section 502.320 and the annual report requirement of Section 502.325 only apply to permitted CAFOs. Under the Agency's proposal, unpermitted large CAFOs are not required to meet the specific requirements of Sections 502.320 and 502.325. However, unpermitted large CAFOs seeking to claim agricultural stormwater exemption under Section 502.102 are required to maintain documentation as specified in Section 502.510(b)(15) either on site or at a nearby office or must make such documents available to the Agency upon request. Section 502.510(b)(15) in turn places an obligation on unpermitted large CAFOs to keep records to document the implementation and management of practices described in subsections (2) through (14) of Section 502.510. The Agency believes that in the case of unpermitted large CAFOs, record keeping requirements applicable to permitted large CAFOs are not necessary to verify whether the unpermitted large CAFOs have made sufficient demonstration to claim the agricultural stormwater exemption under Section 502.102.

Section 502.500 Purpose, Scope and Applicability:

33. Subsection (a) provides that Unpermitted Large CAFOs claiming an agricultural stormwater exemption are subject to requirements of Section 502.510(b). Please explain why the Nutrient Management Plan requirements under Section 502.500(b) and Section 502.505 are not appropriate for large unpermitted CAFOs.

The federal CAFO regulations require unpermitted large CAFOs, claiming the agricultural stormwater exemption, to implement nutrient management practices to provide for appropriate agricultural utilization of nutrients in accordance with 40 CFR 122.42 (e) (1) (vi)-(ix). The federal CAFO regulations under 40 CFR 122 and 40 CFR 412 require specific practices and criteria to be implemented under a nutrient management plan for NPDES permitted CAFOs, which are proposed in Section 502.500(b) and Section 502.505. A large unpermitted CAFO may use the standards such as those required of permitted large CAFOs in Sections 502.500(b) and Section 502.505 to meet the requirements for the agricultural stormwater exemption. However, it is not required to do so by the federal regulations or the Agency's proposal.

34. Also, please clarify whether the NMP developed by an Unpermitted Large CAFO pursuant to Section 502.510(b) must be submitted to the Agency. If not, should the CAFO owner or operator maintain the plan on site and make the plan available to the Agency upon request?

An NMP is not required to be submitted to the Agency by these proposed regulations unless the unpermitted large CAFO is applying for a CAFO NPDES permit. The documentation should be kept on site and be made available to the Agency upon request to fulfill the documentation requirements of proposed Section 502.102(c) and 502.510(b)(15) regarding implementation of the land application practices for unpermitted large CAFOs claiming the agricultural stormwater exemption.

Section 502.505 Nutrient Management Plan Information:

35. Subsection (d) requires that the NMP include the name of the person who developed the NMP and whether the NMP was developed or approved by a certified nutrient management planner. Please provide details regarding entities that issue this certification and the certification requirements.

There are two certifications for nutrient management planning that are available that are specifically applicable to livestock facilities, the United States Department of Agriculture-National Resource Conservation Service (USDA-NRCS) Technical Service Provider program and the Certified Livestock Manager Program under the Illinois Livestock Management Facilities Act.

The USDA –NRCS issues certifications for Technical Service Providers (TSP) for comprehensive nutrient plan development. Qualifications are based upon the category and option the TSP wishes to choose to receive the certification. Criterion for these certifications generally includes all the following except the option of selecting one or more of items 4, 5 and 6:

1. **knowledge and understanding of NRCS and other state regulatory rules**
2. **competency in land application guidelines and proper livestock-waste storage practices**
3. **a proven expertise in nutrient management**
4. **references who can verify proficiency in such areas**
5. **successful completion of an NRCS approved training course or training modules**
6. **possession of specific agriculture related certifications**
7. **possession of professional engineering license for livestock waste handling and storage facilities.**

Requirements for certification for USDA-NRCS Technical Service Provider can be found at http://techreg.usda.gov/RptCategory4Admin.aspx.

The Livestock Facilities Management Facilities Act requires that livestock facilities with 300 or more animal units must be supervised by a certified livestock manager. The certification program is administered by the Illinois Department of Agriculture. Managers of facilities with 300 to 999 animal units can become certified in one of two ways: by attending an approved training course or passing a proficiency exam. Managers of facilities with 1,000 or more animal units must attend the training course and pass an exam. Topics of the training and exams include development of nutrient management plans. More information on this training and certification program is provided at http://web.extension.illinois.edu/clmt/.

36. The Agency proposed in subsection (g) that an NMP include aerial photos or map indicating features including "common places of assembly." Could the Agency be more specific about the kinds of places included in that term?

The Agency intended the phrase "common places of assembly" to have the same meaning as is provided in the Part 900 of the Livestock Management Facility Regulations. In Section 900.101, these regulations define the term "populated area." Under the definition of populated area, the "common place of assembly" is described as "places that operate less than 52 weeks per year, such as schools with seasonal vacation periods and businesses or other places which experience seasonal shutdowns, and parks, camps, and recreational areas which experience seasonal shutdowns or reduced attendance during a portion of the calendar year, provided that such places are frequented by at least 50 persons at least once per week during the portions of the year when seasonal shutdowns or reductions in attendance do occur."

37. The Agency's proposal refers to "land application areas not owned or rented." Would it clarify this subsection to refer to land application areas not owned or rented by the owner or operator of the CAFO?"

The Agency agrees that Section 502.505(h) would be clearer if "by the owner or operator of the CAFO" is added.

Section 502.510 Nutrient Management Plan Requirements:

38. Subsection (b)(1) requires the NMP to demonstrate that the livestock waste application rates not exceed the single year crop nitrogen and single year or multi-year phosphorus requirements for realistic crop yield goals in the rotation. Please clarify whether the procedures of Subpart F must be followed to make the nutrient application rate demonstration. If so, please clarify whether the procedures of Subpart F should apply to Unpermitted Large CAFOs.

The procedures in Subpart F must be followed for permitted CAFOs and for development of the NMP for submission in a NPDES permit application. The procedures in Subpart F are not required to be followed to make the nutrient application rate demonstration for unpermitted large CAFOs that are not applying for an NPDES permit.

Section 502.520 Changes to the Nutrient Management Plan:

39. Please clarify whether the requirements of this section are applicable only to permitted CAFOs. If so, please comment on whether Unpermitted Large CAFOs with NMPs are subject to requirements regarding changes to any of the demonstrations and specifications listed in Section 502.510(b).

Section 502.520 does not apply unpermitted large CAFOs. Unpermitted large CAFOs claiming the agricultural stormwater exemption must have up-to-date records on site.

Section 502.600 Applicability:

40. This Section sets forth that unpermitted Large CAFOs claiming an agricultural exemption consistent with Section 502.102 are also subject to portions of Subpart F. Please identify the provisions of Subparts F, G, and H applicable to unpermitted Large CAFOs.

If an unpermitted Large CAFO seeks to claim the agricultural stormwater exemption, the CAFO must show that its discharge is a precipitation-related discharge from a field where the 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. This demonstration is made through compliance with Section 502.510(b). Since Section 502.510(b) references some provisions in Subpart F, it would be inaccurate to say that Subpart F applies only to permitted CAFOs. However, Section 502.600 does not expand the requirements applicable to unpermitted CAFOS beyond those in 502.510(b).

The direct cross-references to Subpart F in 502.510(b) are to Sections 502.645(a) and 502.630. However, there are other provisions in Section 502.510(b) that also direct the unpermitted Large CAFO to language in Subpart F such as Section 502.510(b)(11) which instructs the unpermitted Large CAFO seeking an agricultural stormwater exemption to comply with the setbacks found in Subpart F.

If an unpermitted Large CAFO seeking to claim the agricultural stormwater exemption chooses to comply with the provisions of 502.615 through 502.645, then it will have also met the requirements of Section 502.510(b)(10). The other remaining Sections of Subpart F (502.605 and 502.610) are applicable to the production area only and would not apply to unpermitted Large CAFOs seeking to claim the agricultural stormwater exemption. Subparts G and H of the proposal are not applicable to unpermitted Large CAFOs.

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

41. Under subsection (c), please clarify whether a CAFO must request alternative performance standards as a part of the initial NPDES permit application under Subpart E or such a request can be made during operation the facility after a permit has been issued by the Agency.

The request for alternative performance standards can be made as part of the initial NPDES application or during operation of the facility after the NPDES permit has been issued. However any request to change the limitations of the NPDES permit, made after the permit has been issued would be a modification to the NMP and NPDES permit and would need to be submitted in an NPDES permit application to the Agency.

42. Also, please clarify the basis on which the Agency can either grant or deny a request for alternate performance standard, and whether an Agency denial is appealable to the Board.

The Agency would review the proposed alternative performance standard and the data and other information available to determine if the standard will meet the proposed Section 502.605(c) regulation that requires a technical analysis of the discharge of the pollutants. This review would be part of a review of an NPDES permit application. In addition the Agency review would consider how the alternative performance standard would meet other provisions of the CAFO regulations in accordance with Section 502.301. If the Agency determines that the requested alternative performance standard

does not meet the standards for issuance of an NPDES permit, the Agency may issue denial of the NPDES permit.

Section 502.610 Additional Measures for CAFO Production Areas:

43. The recordkeeping requirement at Section 502.320(c) requires the maintenance of records documenting the visual inspections performed pursuant to Section 502.610(c). Please comment on whether it would be appropriate to add to Section 502.610(c) language requiring documentation of the visual inspections.

The Agency does not believe it is necessary to add to language in Section 502.610(c), as Section 502.320(c) is applicable to all CAFOs subject to Section 502.610.

44. Subsection (g) requires dead livestock to be disposed of only in facilities used solely for disposal of dead livestock. At page 48 of the Technical Support Document, the Agency notes that flows from these facilities could be managed in accordance with the Illinois Dead Animal Disposal Act (225 ILCS 610/17 (2012)). Please comment on whether subsection (g) should be amended to require disposal of dead livestock and flows from facilities used solely for disposal of dead livestock to be managed in accordance with the Dead Animal Disposal Act.

The Illinois Dead Animal Disposal Act provides administrative authority to the Illinois Department of Agriculture for development of regulations, implementation and enforcement of said Act. The dead livestock handling areas of the CAFO and flows are required to meet proposed Section 502.610(g) and areas where these materials are handled or disposed may also be subject to the Dead Animal Disposal Act. The Agency and Board have authority under the proposed CAFO regulations and the Illinois Environmental Protection Act to address the improper management and disposal of dead livestock and flows from dead livestock but the Agency and the Board have no authority under the Dead Animal Disposal Act. The requirements of the Dead Animal Disposal Act already apply, when applicable, to these dead animal facilities. It is for these reasons that the Agency does not believe it is necessary that the requirement to follow the Illinois Dead Animal Disposal Act should be added to the proposed CAFO regulations.

Section 502.615 Nutrient Transport Potential:

45. Please clarify whether "[s]oil test phosphorus" at subsection (a)(5) refers to available soil phosphorus content. If it does not, please explain what that factor means.

"Soil test phosphorus" in subsection (a)(5) refers to available soil phosphorus content.

46. Subsection (c)(2) refers to soil phosphorus test methods Bray P1 and Mechlich 3. Please clarify whether these methods are included in one or more of the documents incorporated by reference in Section 501.200. If so, please identify the specific documents. Also would it be acceptable to the Agency to add a cross reference in subsection (c)(1) to Section 501.200, which contains the documents incorporated by reference?

The soil test procedures for Bray P1 and Mehlich 3 are included in "Recommended Chemical Soil Test Procedures for the North Central Region" published by the University of Missouri. The Agency finds it acceptable to cross reference through incorporation by reference of these procedures in this document in Section 501.200.

47. Subsection (c)(3) provides that, for nitrogen-based application of livestock waste, soil loss must be less that the erosion factor T calculated using the Revised Universal Soil Loss Equation 2, which is found at a Purdue University website. Please comment on whether it would be appropriate to include the soil loss equation in the rule instead of a link to a website, which may be changed in future.

The Agency did not include RUSLE2 in the incorporations by reference because it is a software tool that uses inputs from the user to determine the output of the equation and because it was not possible to include a hard copy of a document for the record. The Agency would not object to inclusion of this source in the incorporations by reference.

48. The undesignated paragraph after subsection (c)(4)(B) allows a CAFO to demonstrate that a setback or buffer is not necessary because implementation of alternative conservation practices or field specific conditions will provide pollutant reductions equivalent or better than the reductions that would be achieved by the 150-foot setback. Please clarify whether the "150-foot setback" demonstration addresses the 50-foot vegetative buffer required under subsection (c)(4)(A). Also, would it be acceptable to the Agency if this undesignated paragraph after subsection (c)(4)(B) is designated as subsection (c)(4)(C)?

The Agency did intend the undesignated paragraph below 502.615(c)(4)(B) to apply to the 150-foot setback, under subsection (c)(4)(A) as well as 50-foot vegetative buffer as required under subsection (c)(4)(B). Therefore, the Agency concurs with the Board's suggestion to designate the undesignated paragraph as subsection (c)(4)(C) to provide further clarity.

49. Subsection (c)(5) sets forth that setback requirements of subsection (c)(4) will not apply if conduits on the field are greater than 400 feet from surface waters. Please clarify whether the CAFO would be subject to setback requirements of Section 502.645, including Section 502.645(b)(2).

The intent of subsection (c)(5) is to provide that if the conduits are greater than 400 feet from surface waters, then setback requirements in (c)(4) do not apply. In other words, the 150-foot setback or 50-foot vegetative buffer setback requirements in subsections (c)(4)(A) or (c)(4)(B) do not apply if the conduits are greater than 400 feet from surface waters. However, the requirements of subsection (c)(1), which includes requirements of Section 502.645, still do apply.

Section 502.620 Protocols to Land Apply Livestock Waste:

50. Subsection (f) provides in part that "[i]njection or incorporation within 24 hours shall be used when land slope is greater than 5%. . . ." Please clarify whether the 24-hour period refers to the "24 hours preceding a forecast" of precipitation specified in subsection (d). If so, should the rule language under subsection (f) include a cross reference to subsection (d)?

Injection or incorporation on slopes greater than 5% is intended to occur within 24 hours from the time of land application of the livestock waste, regardless of weather conditions.

51. At subsections (j) and (k), the Agency has proposed "common sense conservative approach" of allowing application of livestock waste at only 50 percent of the agronomic nitrogen rate near bedrock and the water table to protect groundwater. TSD at 34-35. Please comment on whether additional limitations, including prohibiting livestock waste application, may be necessary for soils with high infiltration rates.

We have proposed additional restrictions in subsections (h) and (i) to address fields with high risk to groundwater through infiltration.

Section 502.625 Determination of Livestock Waste Application Rates:

52. Subsection (f) requires the calculation of nitrogen credits for nitrogen-producing crops grown the previous year, for other sources of nitrogen applied for the growing season, and mineralized organic nitrogen in livestock waste. Please explain how nitrogen credits calculated pursuant to subsection (f) will be accounted for in determining the livestock waste application rates.

For crops with nitrogen fixation in previous years, the Illinois Agronomy Handbook referenced in Section 502.625(h) provides nitrogen credits for these crops. Other sources of nitrogen (not from the CAFO's livestock waste) applied during the growing season must be accounted for by determining the amount of plant available nitrogen expected to be applied from all sources. For example, the amount of nitrogen in commercial sources of fertilizer nitrogen would be added to the amount of plant available nitrogen applied with the livestock waste to determine the total amount of

plant available nitrogen applied for the crop. For previous years application of livestock waste organic nitrogen carryover using the factors in proposed Section 502.625(f)(2) will be determined from the previous year's application of livestock waste. For example if the first year's organic nitrogen mineralization is 20 percent of the total organic nitrogen and the livestock waste was applied in the previous year then 10 percent of the organic nitrogen applied in the first year is calculated as available in the second year of crop growth at the land application site. Livestock waste application rates under these rules cannot exceed the agronomic nitrogen rate which is the annual amount of nitrogen required for the realistic crop yield goal.

Section 502.630 Protocols to Land Apply Livestock Waste During Winter:

53. Please comment on whether the calculation of storage volume under subsection (a)(2) must include a safety factor of safety to minimize the risk that the volume of waste and other materials requiring storage exceeds the 120-day storage capacity.

The volume calculation to be conducted by the CAFO owner prior to December 1 of each year to determine the possibility that winter application of livestock waste would become necessary must consider those factors that would reduce effective storage volume—runoff from areas outside the storage unit under conditions when frozen ground would increase the volume of that runoff, and direct precipitation into the storage unit. Since these calculations are only estimates of the volume remaining to store livestock waste (as opposed to actual volumes based on measurements, which by the nature of timing cannot be made prior to December 1), some reliable and effective means of providing a safety factor is needed if miscalculations occur or unforeseen conditions arise. We proposed, therefore, in Section 502.630(a)(2)(E) that the calculation, regardless of their accuracy or of actual weather conditions that may occur, allow for 2 feet of freeboard. This open volume should provide adequate and observable (i.e., measurable) storage capacity and a safety factor commensurate with the original volume of the storage unit.

54. Subsection (b)(2) sets forth "No discharge may occur during land application of livestock waste." Please clarify whether this provision prohibits any discharges to the waters of the United States.

This language is directed specifically at a discharge from the land application field "during" winter land application. Land application should not be conducted in a manner that would cause a dry weather discharge or where livestock waste would flow directly off a frozen field. If the Board added the

phrase "to waters of the United States" to the end of 502.630(b)(2), the regulation would be somewhat narrower than intended by the Agency's proposal.

55. In subsection (a)(2)(C)(i), the Web address of the State Water Survey source for determining normal precipitation isn't the same address as that listed in the Statement of Reasons at page 74, footnote 62. Both sites appear to include normal amounts of precipitation for Illinois locations. Would the Agency clarify which of these two Web addresses it intends to list in the proposed rule or whether it intends to list both?

The website proposed in the regulations is the correct one.

56. Subsection (b)(6) refers to an obligation to monitor specific fields when the ambient temperature is great[er] then 32° F. Can the Agency clarify how it intends for an owner or operator to determine that temperature?

The proposal as drafted does not require a specific source or method to determine current temperatures under this section.

57. Subsection (c)(4) allows application of livestock waste if the 'median" Bray P1 or Mechlich 3 soil level phosphorus is equal to or less than 300 pounds per acre. Please explain the rationale for using the median phosphorus level, when the Agency has not relied on median level in provisions including Sections 502.615(c)(2) and (d)(3).

The median Bray P1 or Mehlich 3 value of results from soil samples taken in a field is recommended in the Illinois Agronomy Handbook to determine appropriate land application rates of phosphorus fertilizer on a field. The median value is used because it provides the most representative value of the available soil test phosphorus on a field and provides a consistent application rate on the field for the application of the livestock waste under winter conditions. In the same manner the median soil test phosphorus can be used according to the Illinois Agronomy Handbook to determine application rates of livestock waste during other periods when the land is not frozen, ice or snow-covered. The Agency intended that the median amount also be used in sections 502.615(c)(2) and (d)(3), (4) and (5).

Section 502.645 Land Application Setback Requirements:

58. Subsection (b)(1) allows livestock waste to be land applied within 200 feet of surface water if there is adequate diking. The Agency states at page 55 of the TSD that "diking is adequate if it prevents runoff from the land application from entering surface water that are within 200 feet of the land application area." TSD at 55. Please comment on whether it would be acceptable to the Agency if the definition of "adequate diking" in the TSD is included in the rule language for purposes of clarity.

The Agency's discussion of what constitutes an "adequate diking" for the purposes of water pollution on page 55 of the TSD was meant to be a brief explanation in the context of land application setbacks. The Agency did not intend it to be a complete definition of the phrase "adequate diking." As the explanation is limited in its scope and context, the Agency recommends the Board not to adopt this explanation as the definition of the phrase.

Section 502.710 NSPS for Dairy Cows and Cattle Other Than Veal Calves:

59. Subsection (a) provides that NSPS applies to "[a]ny CAFO with '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. . . ." The Board notes that the proposed rules do not define Large, Medium and Small CAFOs in terms of capacity. Please clarify whether the requirements of this Section apply to CAFOs with 'capacity" to stable or confine the specified number of animals or actually stables or confine the specified number of animals.

The requirements of Section 502.710 apply to the capacity of the CAFO. This follows the requirements of the federal regulations for NSPS in 40 CFR 412 that is based on the capacity of the CAFO.

60. Please explain the rationale for not requiring new CAFOs with 1,000 or more veal calves to comply with the NSPS, while existing CAFOs with veal calves may be subject to discharge limitations under Subpart F.

CAFOs with 1000 or more veal calves are subject to the NSPS in Subpart H.

Section 502.720 Horse and Sheep CAFOs: BPT, BAT and NSPS:

61. Subsections (a) and (b) set forth BPT and BAT for existing large horse and sheep CAFOs. Please explain whether existing horse and sheep CAFOs have choice between the proposed BPT and BAT. If so, are there any criteria for selecting the appropriate standard, or does the owner or operator of the CAFO chose the applicable effluent limitation?

Under the Clean Water Act, existing sources are subject to the requirements of BPT, BCT, and BAT standards. Of these standards, the Agency is required to use the more stringent effluent standard for each pollutant in

writing the permits. Therefore, under the Agency's proposal, existing horse and sheep CAFOs will be required to comply with the more stringent BAT standard. The Agency left the subsection (a) language in its proposal just to be consistent with the federal language of Part 412.

62. Please clarify whether it would be acceptable to the Agency if the term "maintained" is added under subsection (a)(2) to read "a facility designed, constructed, operated and maintained to contain all process generated wastewaters

This language is taken directly from 40 C.F.R. 412 Subpart A which did not use the word maintained.

63. Please clarify whether the NSPS for new horse and sheep under subsection (c) is limited to the application of BAT.

The NSPS for new horse and sheep is the same as the BAT for existing horse and sheep CAFOs.

Section 502.800 Applicability:

64. Under subsection (c), please clarify whether it would be acceptable to the Agency to replace the phrase "[t]hese limitations and requirements" with "[t]he limitations and requirements of this Subpart."

Yes, that change would be acceptable.

Section 502.810 Production Area Requirements:

65. This Section prohibits any discharge of livestock waste pollutants to waters of the United States from the production area unless the CAFO complies with alternative livestock waste discharge limitations. Please clarify whether the Agency will require CAFOs seeking to comply with alternative limitations to demonstrate "no discharge" under Section 502.830(a). If so, please describe the elements of such a demonstration. If not, please explain how the Agency will ascertain that a CAFO is not discharging livestock waste to waters of the United States.

The alternative performance standards approach was established by EPA to provide compliance flexibility for CAFOs and to encourage them to adopt innovative technologies for handling livestock waste. Under the alternative approach, CAFOs are required to demonstrate that the innovative technologies will achieve equivalent or greater reduction of the pollutants. Thus, this Section requires that CAFOs, at the minimum, must demonstrate "no discharge." To show that the alternative approach would achieve equivalent or greater pollutant reductions, the CAFO must submit a technical analysis that satisfies all the elements outlined in Section 502.840.

As part of this showing, the CAFO will provide information that will describe how the innovative technologies will generate equivalent or greater pollutant reductions. Based on this technical analysis and other information provided by the CAFO, the Agency will incorporate the specific performance standards.

ILLINOIS EPA'S ANSWERS TO THE PREFILED QUESTIONS OF THE ILLINOIS AGRICULTURAL COALITION

Questions related to Testimony of Bruce Yurdin:

1. On page 1 and 2 you generally discuss IEPA inspections: "The purpose of any inspection conducted by IEPA is to determine compliance with applicable state law, Illinois Pollution Control Board regulations and permit conditions, to the extent that any given facility or location holds a permit." You then recite IEPA expectations of livestock facilities.

(a) What are the IEPA plans for inspections of livestock facilities upon the promulgation of these rules?

With the adoption of new livestock rules, we anticipate several steps to make sure the information gets into the hands of the regulated community and that any questions about the rules are provided an adequate forum. We also anticipate Agency staff, in order to participate in this role with the producers and the public, will need training in the regulatory changes that have been approved by the Illinois Pollution Control Board. As part of this effort, we would describe to producers and the public the elements of an Agency inspection and the changes made necessary in identifying compliance and documenting non-compliance.

(b) Does IEPA plan to inspect unpermitted facilities and, if so, under what circumstances?

Since most livestock facilities in the state are not currently permitted, there would be a continuing effort to inspect those facilities that are not now under permit. Unpermitted facilities will remain a priority as will our response to citizen complaints. With the adoption of these rules and the subsequent dissemination of information about them, we believe producers will be in a better position to understand the details needed to achieve compliance and prevent livestock waste discharges. Overall, the emphasis that we anticipate for inspections will be to determine compliance with the new rule and visit those facilities that would, due to their design, operation and maintenance, have a greater likelihood to have an actual discharge.

(c) As producers have legitimate concerns related to the biosecurity of their facilities, as well as the safety of their animals, please explain the IEPA's protocol regarding notifying a producer and gaining access to the facility prior to any inspection.

The Agency's biosecurity procedures specify that Agency staff must contact the producer prior to the inspection (except for emergency situations) to discuss the producer's biosecurity requirements. The discussion between the Agency staff and the producer must address personal protection that will be used by staff, including the use of protective outerwear, staff downtime (time in between livestock inspections that would minimize pathogen transfer to livestock), vehicle care and parking at the site, equipment cleaning and planning the visit, that would include details of which areas will be visited and in what order.

2. On page 2 you state "Most of the elements in proposed sections 502.505, 502.510 and 502.515 are required in the federal CAFO rule."

(a) Please identify which part of these proposed rules are *not* required by the federal CAFO rule;

Proposed sections 502.505, 502.510 and 502.515 are either taken exactly from the federal rule or are necessary to implement the federal rule in the state of Illinois. Sections 502.505, 502.510(b)(1)-(2), (11)-(14), (16) are necessary to implement the federal rule; the rest of section 502.510 and 502.515 are taken from the federal rule. For further discussion, please consult the Statement of Reasons, pp 77-82.

(b) Please identify which part of these proposed rules are derived from existing livestock management regulations from the Livestock Management Facilities Act;

Proposed section 502.505, 502.510 and 502.515 are not derived from existing livestock management regulations under the Livestock Management Facilities Act (LMFA).

(c) Please identify which of these proposed rules is completely new (i.e., not derived from the federal CAFO rule and not part of the existing state LMFA rules or existing Subtitle E rules).

Proposed sections 502.505, 502.510 and 502.515 are either taken exactly from the federal rule or are necessary to implement the federal rule in the state of Illinois.

3. On page 4 you state the following: "The terms of the NMP, as provided in the Approach used by the livestock producer can be reviewed by the Illinois EPA during an on-site visit. Diversion of clean water, to use the same example, would be an important factor if our field review of discharges or a potential to discharge were observed. A review of the NMP may be necessary to determine if diversions were planned or if new adjustments to the NMP or to the design, construction, operation and maintenance of the facility were needed."

(a) What do you mean by the "Approach" used by the livestock producer?

The reference to "Approach" was to the federal terms "Linear Approach" and "Narrative Rate Approach". The section of the testimony concerned Illinois EPA inspections and the review of the NMP, written and conducted by the livestock producer using one of those two "Approaches".

(b) What would form the basis for an IEPA observation of "a potential to discharge"?

The potential to discharge would be indicated by a review of the design, construction, operation and maintenance of the facility. An Agency inspection may reveal that stormwater runoff was not diverted away from the feedlot from surrounding building roofs but was allowed to run through the lot, leaving gullies in the lot and dead or stressed vegetation and manure outside the lot. In this case the design of the stormwater management system would be inadequate since the building lacks proper gutters and downspouts to divert clean stormwater from the feedlot. Manure outside the feedlot, stressed vegetation and gullies indicate inadequate livestock waste management and improper maintenance of the manure in the feedlot proper that resulted in manure exiting the feedlot. These indicators may be present even when rainfall is not occurring and when a discharge may not be present at the time of the inspection. These deficiencies may be corrected and the runoff problem resolved. The determination of whether a NPDES permit would be needed in this instance may depend on the livestock owner's willingness to make adequate corrections in a timely manner. In other cases, corrective actions, such as installing gutters and downspouts to divert stormwater, may not be quite as simple or affordable. The slope of the open feedlot may need to changed, or the feedlot may need to be moved or covered. These are more difficult and expensive tasks, may take longer to construct and so in the interim a permit may be necessary.

The "potential to discharge" has been referred to in EPA guidance to assist states in carrying out the CAFO program and, as stated above, indicators may be present to assist the inspector in making a determination that a

discharge will occur even though it may not be happening at the time of inspection. The indicators of prior discharges can be significant.

(c) If the IEPA inspector, in his or her judgment, believes there is insufficient diversion of clean water at the facility, or otherwise observes a "potential to discharge," is such observation sufficient reason enough to cite the facility for violation, and, if so, what violation? Does the IEPA consider inadequate "diversion of clean water" to itself constitute a discharge? Is it sufficient reason for an IEPA determination (or designation under Section 502.106) that the facility needs an NPDES permit? How is such determination/designation made – and challenged, if the producer disagrees?

Unpermitted Large CAFOs could be cited with a violation if a discharge from either the production area or the land application fields occurred unless the discharge was an agricultural stormwater discharge. Indicators of past discharges consistent with the design, operation and maintenance of the facility could be used in making this determination although such indicators have been used in the past to prioritize the need for follow up inspections when runoff problems can be observed and documented.

(d) Under what circumstances, if any, would an unpermitted CAFO be cited with a violation of the Illinois Environmental Protection Act or, more specifically, of these proposed rules? Under what circumstances, if any, would an unpermitted CAFO be subject to an IEPA inspection?

Unpermitted CAFOs may be inspected on the basis of their design, operation, size, location, livestock waste storage and disposal practices and the proximity to waters and those waters that may be impaired by contaminants related to livestock.

4. Definition and Interpretation of Discharge.

(a) Please identify, with specificity, what the IEPA regards as a discharge that requires: (a) regulation by permit; and/or (b) a violation notice.

Any livestock waste discharge that cannot be corrected or will not be eliminated by the CAFO owner can be subject to both a violation notice and to a permit. As stated in the proposed rule, the conditions for requiring a permit are detailed in Section 502.101. The criteria for issuing a violation notice to enforce compliance is lower than the criteria for requiring a permit. When the Agency issues a violation notice, the outcome is hoped to be a compliance commitment agreement that results in long term compliance (in the case of CAFOs, the elimination of the discharge) by some change or changes in the design, operation or maintenance of the facility. In many cases, when site conditions and other factors such as the willingness of the CAFO owner allow, compliance achieved over the short term to eliminate a past discharge may preclude the issuance of an NPDES permit.

(b) Under what circumstances will a producer receive a violation notice or a discharge from a permitted facility (i.e., what effluent limits are contemplated in Illinois' general NPDES CAFO permit)?

A violation notice may be issued if the discharge is in violation of the terms and conditions of the permit.

5. On page 6, first full paragraph, you discuss "six criteria that must be met in the fields before application can begin."

(a) Please explain those six criteria and where they are found in the proposed rules -and where they are found in the corresponding federal CAFO rule.

The six criteria specified in Section 502.630(c) that must be met in the fields before winter land application can begin include:

1) **limiting application to sites with adequate erosion controls,**
2) **having crop residue to slow surface runoff,**
3) **applying to slopes of less than 5%,**
4) **having erosion control factors less than the tolerable limit ("T") as determined using the USDA's Revised Universal Soil Loss Equation 2, or RUSLE2,**
5) **having soil phosphorus levels of less than 300 pounds per acre, and**
6) **maintaining three times the otherwise normal setbacks (as specified in Section 502.615 and 502.645) except for field with less than 2% slopes in which case the setbacks must be twice the normal distance.**

The federal CAFO rule does not specify winter application criteria. The federal rule requires that states' standards account for the timing of application found in 40 CFR 412.4(c) and 40 CFR 122.42(e)(5).

(b) Does the IEPA expect that each of these six criteria must be met prior to each and every application of manure? Please explain.

We are proposing that all six criteria must be met when land application is undertaken during the winter when the fields are frozen or ice or snow covered. The six criteria were proposed so that when application does occur under these unfavorable conditions that the action would be conducted to minimize the potential for contaminated runoff.

(c) What obligation does the IEPA expect of a producer who contracts with a grain farmer, or other person not associated with the CAFO, as it relates to the proper application of manure to lands not controlled by the CAFO owner or operator?

The CAFO owner's obligation includes properly accounting for the land application arrangement within the NMP. The permittee is also responsible to identify the recipient of the livestock waste and other details, under Section 502.320(w)(7) and 502.505(h) in the CAFO's records, and under Section 502.325(b)(3) the permittee must list the amount transferred in the annual report.

6. On pages 6 through 8 (and also on pages 8 - 10 of Sanjay Sofat's testimony) IEPA discusses land application requirements and limitations applicable to large CAFO facilities that are *not regulated* under an NPDES permit. In IEPA's Statement of Reasons, IEPA recognizes that it is well-established, under federal case law, that only facilities that discharge are required to apply for an NPDES permit. More to the point, a potential to discharge has specifically been determined NOT to be sufficient regulatory basis for an NPDES permit requirement. As the IEPA also recognizes, under the federal rules, when a discharge occurs, the discharge might well be an exempt stormwater discharge (not subject to permitting) if the producer has engaged in the best management practices set forth in 40 CFR 122.42(e)(1)(vi) through (ix), specifically, that the producer has done the following:

- identified appropriate site specific conservation practices to be implemented, including buffers or equivalent practices to control runoff of pollutants (40 CFR 122.42(e)(1)(vi));

- identified protocols for appropriate testing of manure, litter, processed wastewater and soil (40 CFR 122.42(e)(1)(vii))

- established protocols to land apply manure, litter or processed wastewater in accordance with site specific nutrient management practices that encourage agricultural utilization of the nutrients (40 CFR 122.42(e)(1)(vii));

- identified specific records that were maintained to document the above implementation practices (40 CFR 122.42(e)(1)(ix)).

Here, the IEPA proposes to require that an unpermitted large CAFO (one that does not expect or intend to discharge livestock waste) must meet the identical regulatory provisions required of permitted facilities, as set forth in Section 502.510(b) - regardless of whether there is (or will be) a discharge - and without actually requiring a permit proposal.

(a) What is the basis and authority for IEPA's requirement that a large CAFO that is not discharging be required to meet identical requirements to those prescribed for permitted facilities that are discharging?

Consistent with the Clean Water Act, the federal regulations at 40 CFR 123.25 require states to have adequate legal authority to implement the federal provisions. However, this section also allows states to omit or modify any federal provisions to impose more stringent requirements. Illinois thus has the authority to adopt more stringent requirements if necessary. CAFOs that discharge from their land application area that do not qualify as agricultural stormwater discharges must obtain an NPDES permit under the Clean Water Act. To seek an agricultural stormwater related discharge exemption, the CAFO must apply livestock waste in accordance with site specific nutrient management practices as well as state technical standards to ensure appropriate agricultural utilization of nutrients. Section 502.510(b) lists both specific as well as general nutrient management practices and state technical standards that must be complied with by a CAFO seeking the agricultural stormwater exemption. The Agency believes that specificity provided in Section 502.510(b) provides clear criteria on what needs to be complied with by a CAFO seeking the agricultural stormwater exemption, and removes any guesswork on the CAFO owner/operator's part. The Agency's approach is also equitable as it requires all CAFOs seeking the agricultural stormwater exemption to comply with the same set of requirements. Further, the Agency's approach imposes necessary requirements on unpermitted large CAFOs to ensure that contribution of pollutants from these facilities into waters of the U.S. is minimal.

(b) Is it the IEPA's expectation, as envisioned in the federal rules, that the NMP is something maintained by the producer at his facility and utilized if necessary to justify an exempt discharge -- or does the IEPA envision submission of the NMP to the IEPA for review and public participation, as with an NPDES permit? If the latter, please point out the appropriate section in these rules setting forth such requirement - as well as authority for any such requirement.

Unpermitted Large CAFOs must maintain the documents specified in proposed section 502.510(b)(15) either on site or at a nearby office. Section 502.501(b)(15) requires the CAFO to maintain records to document the implementation and management of the minimum elements described in 502.510(b)(2)-(14). The Illinois EPA's proposal does not require unpermitted large CAFOs to submit an NMP for review and public participation.

(c) If a large CAFO does not have an NMP - or its NMP does not meet one or more of the provisions in proposed Section 502.510(b), will the IEPA cite the large CAFO with a violation - even if there has been no discharge? What violation?

An unpermitted large CAFO is not required to have a NMP to meet the provisions of proposed section 502.510(b). However, an unpermitted large CAFO that cannot demonstrate that 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 in

compliance with 502.510(b) will not be able to claim that a precipitation related discharge of livestock waste from the land application area is an agricultural stormwater discharge. An unpermitted discharge from a CAFO that is not an agricultural stormwater discharge is a violation of the Act and the proposed regulations.

(d) Does IEPA agree that the federal regulations do not require the submission of an NMP, or the adherence to strict state-created one-size-fits all technical standards, in order to demonstrate proper nutrient management? Does IEPA agree that there are other ways to demonstrate proper nutrient management plan and therefore properly distinguish a livestock waste discharge from an exempt agricultural stormwater discharge, even for a large CAFO, without the required implementation of a standardized and regulatory-driven NMP?

For unpermitted Large CAFOs, a NMP does not have to be submitted under either federal or the Agency's proposed CAFO rules. Unpermitted Large CAFOs seeking the agricultural stormwater exemption must comply with 502.510(b) to demonstrate proper nutrient management.

(e) Does IEPA understand that the requirement for an NMP for CAFOs which do not discharge will create increased costs of compliance? Has IEPA estimated that cost of compliance? Has IEPA reviewed the USEPA's estimated costs of compliance in its lengthy federal rule proposal and preamble? What is IEPA's rationale for requiring greater costs for Illinois producers?

The duty to comply with Section 502.510(b) requirements applies to permitted and unpermitted large CAFOs seeking the agricultural stormwater exemption only. The Agency recognizes that meeting the requirements of Section 502.510(b) will add to the cost of compliance for permitted and unpermitted large CAFOs. However, the Agency believes that this increased cost is justified given the environmental benefits that will be achieved by instituting the practices outlined in Section 502.510(b). The Agency has not estimated the cost of compliance with the specific requirements stated in Section 502.510(b), nor does the USEPA's rule provide a cost break down for elements specific to the agricultural stormwater exemption.

7. On page 8 you discuss how IEPA might make "a designation" as to the need for a permit at a particular facility. The designation provision is found at Section 502.106 of the proposed rules.

(a) Please explain how IEPA will make a determination related to a facility's need for a permit. Please explain how the *Waterkeeper* and *National Pork Producer* cases, both recognized in the IEPA's Statement of Reasons, will guide the IEPA.

Recent federal court decisions have established that the need for a permit will be based on whether a facility has an actual discharge. Whether the

discharge is ongoing depends on several factors including the design, construction, operation and maintenance of the facility, and the factors that affect discharges, such as the slope of the feedlot, size, location, means of conveyance of livestock waste, livestock waste storage and disposal practices and the proximity to waters. All those factors must be reviewed in making the determination of the need for a permit.

(b) In proposed Section 502.106, IEPA eliminated the requirement that a producer be notified in writing of any such designation. What was IEPA's rationale for this elimination?

We made this change in response to a comment from USEPA to ensure consistency with the Federal CAFO Rule.

(c) Does IEPA consider such designation a final agency action subject to appeal to the Pollution Control Board? If not, how does the producer challenge such designation?

The producer may appeal the Agency's determination before the Board once the permit has been issued.

(d) Has IEPA ever before utilized this "designation" process to identify and require NPDES permitting for CAFOs? If so, please explain when and how.

The Illinois EPA does not keep records of the use of Section 502.106. Based on a review of the files for the permits issued in the last few years, we do not believe any small CAFOs have been designated and required to obtain a NPDES permit. We will continue to explore this matter and would be pleased to provide additional information at the hearing, as necessary, to address this issue.

8. On page 9, you discuss record keeping requirements. The following requirements do not appear to be a part of the federal rule: subsurface draining systems, quantity of waste removed during de-watering, and soil conditions at the time of application to fields (especially non-winter).

(a) Please explain each of these requirements and provide justification for each.

An explanation and justification for these elements of the CAFO owner's recordkeeping is provided in the Technical Support Document on pages 58-59. As stated there, we justify these limited additional requirements as a means of protecting water quality by verifying the inspection of subsurface drainage systems, documenting the quantity of water removed during de-watering and addressing the condition of soils at the time of land application.

We believe these few elements are important enough to require records in the event that discharges occur and in those cases when a discharge may not have occurred but case-specific, third party questions are raised before the Agency.

(b) Please explain how a producer records a visual observation of a subsurface drainage system, as suggested on page 10.

The producer's observations should include but are not limited to recording the presence or absence of flow in the tile outlets and whether the flow, if present, had an unnatural or unusual color or odor. Photos of the outlet discharge may also be useful. Any repairs made by the producer to the field tiles should also be recorded.

Questions related to Testimony of Sanjay Sofat:

9. On pages 4 and 5, you state that the federal CAFO rule requires small and medium CAFOs to comply with technology-based requirements developed by the permitting authority on a case-by-case basis. You then explain that instead of taking this case-by-case approach, the IEPA chose to develop one set of technical standards for all, regardless of size or type.

(a) How does IEPA distinguish between requiring a General Permit for CAFOs and an Individual Permit for CAFOs?

If a CAFO is eligible for coverage by the general permit for CAFOs, then the Agency will review the application and NMP for coverage under the general permit. If the CAFO can meet the conditions of the general permit then the Illinois EPA would likely propose coverage under the general permit. An individual permit may be issued if the applicant requests coverage under an individual permit and provides reasons for the requested individual permit. If the Agency determines that different or additional permit conditions other than the conditions in the general permit are needed, then an individual permit could be issued to include those conditions. These conditions may be needed to carry out requirements of a Board order or court order or to address alternative plans for design, construction, operation or maintenance of the CAFO that do not meet the conditions of the general permit.

(b) Does IEPA envision that all CAFOs that are required to be permitted will be required to be permitted via the General Permit? (The rules only refer to the General Permit.) Under what, if any, circumstances will IEPA expect (or allow) an Individual Permit?

No, however, the Agency expects that most CAFOs will be covered by the General Permit (See response to 9 (a) above). As an example, the current general permit for

CAFOs does not cover duck CAFOs and if such a CAFO required an NPDES permit an individual permit would likely be issued to the duck CAFO.

(c) How does IEPA distinguish between a permit condition pursuant to the IEPA developed General NPDES CAFO permit - and the proposed Board rules relevant to CAFO facilities? Does IEPA envision changes to its general permit on the basis of these rules?

Permit Conditions in the general NPDES permit are based on existing Subtitle E and Subtitle C regulations and federal CAFO regulations. The proposed rules update Subtitle E to include the revised federal CAFO regulations and provide technical standards developed in accordance with the federal regulations as discussed in the Technical Support Document and Statement of Reasons. The Illinois EPA expects to modify the general permit based on the final version of the amended Subtitle E regulations.

(d) For purposes of the record, would the IEPA submit, in this proceeding, the IEPA's (i) current General NPDES permit for CAFOs; and (ii) General Permit that it would require adherence to upon promulgation of these rules?

(i) The Agency will enter the current permit into the record as an exhibit at the August hearings.
(ii) The Agency will not submit a General Permit that it would require adherence to upon promulgation of these rules because this would require the Agency to take on an extremely burdensome task of writing a general permit to comply with rules that do not exist.

[e] (d) How does a producer appeal, to the Board, a permit condition set forth in a General Permit, as envisioned by Section 39 of the Illinois Environmental Protection Act?

The Agency anticipates that any producer who comments on the CAFO General Permit during the public notice period may appeal conditions in that permit to the Board under Section 40 of the Environmental Protection Act within 35 days of the date it is issued or renewed. If a producer does not want to be bound by the General Permit that is in effect or cannot comply with that permit, the producer would be expected to submit an application for an individual permit. Conditions of the individual permit could also be appealed to the Board under Section 40 of the Act.

10. On page 4 you state: "The Agency's proposal includes best management practices identified by the federal regulations when found adequate and protective of water quality. However, the Agency's proposal goes beyond these requirements where the Agency finds it necessary to protect waters of the U.S. The Agency relied on the well established best management practices provided in the Livestock Management Facilities Act where it found them to be proper and effective to meet federal requirements and state technical standards."

(a) Please identify, and provide rationale for, whatever specific provisions of the proposed rules the IEPA (i) derived from regulations pursuant to the LMFA and (ii) derived from the federal regulations in a manner contrary to the regulations established by the LMFA.

The LMFA is one of multiple sources that the Agency consulted in drafting this regulatory proposal. Insomuch as portions of the Agency's proposal are "derived" from the LMFA, the Agency is not obligated to adopt regulations identical in substance to the LMFA or regulations adopted thereto. The Agency consulted the LMFA to ensure that its proposal is not inconsistent with the LMFA and resulting regulations.

The Agency's Statement of Reasons and TSD identify how and when the Agency consulted with the LMFA in drafting the language in this proposal.

See Statement of Reasons pp. 64-65, TSD pp. 9, 22, 24, 36-37, 40, 43- 46, 51-52, 56.

[There is no question 11 in this document]

<u>Questions related to Testimony of Daniel Heacock:</u>

12. On page 3, you state "In accordance with federal CAFO regulations, the Agency must provide a period of opportunity to the public to review the permit application and the NMP and submit comments and request a hearing."

(a) We assume that your testimony related to IEPA and public review of CNMPs is related directly to those CNMPs that are submitted to IEPA in the context of a permit application, not CNPMs required of a large CAFO in order to demonstrate an agricultural stormwater discharge exemption. Is that a correct assumption?

My testimony refers to public review of NMPs submitted in an NPDES permit application.

(b) Please provide the reference to the Clean Water Act law or regulations which require an opportunity for public review and comment regarding anything other than an application for an individual NPDES permit.

The federal regulations at 40 CFR 122.23 (h) require an opportunity for public review and comment regarding the application and nutrient management plan for CAFOs to be covered by a general permit. See page 23 of the Statement of Reasons regarding 40 CFR 122.23 (h).

13. The IEPA envisions a 30 day period for the public to review these "complex NMP's". The IEPA compares such NMP's to "complex individual NPDES permits". Under Illinois law, an individual NPDES permit is subject to public comment and also subject to appeal to the Illinois Pollution Control Board.

(a) What procedure does tile [the] IEPA envision for review of its determinations as they related to NMP's and general NPDES [CAFO] permits?

The procedure for review would involve review and determination of whether the CAFO permit application can be covered by the general NPDES permit and review of the NMP to determine if it is sufficient to meet the regulations and general NPDES permit. Upon 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. The procedure is further discussed on pages 7 and 8 of the Technical Support Document.

(b) What is the expected review time for the IEPA to issue a determination on (a) a general NPDES CAFO permit application; and (b) an individual NPDES CAFO permit application?

a)180 days
b) 270 days

Questions General to all Testimony. the Proposed Rules and the Statement of Reasons.

14. Section 501.252. Frozen Ground. Currently, the definition reads: "Soil that is frozen anywhere between the first ½ inch to 8 inches of soil as measured from the ground surface." During discussions with the Stakeholder Group, IEPA proposed to model this definition from that of a neighboring state. Despite objections, the IEPA chose Wisconsin.

(a) Please explain the IEPA's rationale for this choice instead of a state with more similar climate and agricultural environment, such as Iowa?

Iowa's Chapter 65 rules governing the application of livestock waste define "Frozen Ground" as "soil that is impenetrable due to frozen soil moisture but does not include soil that is only frozen to a depth of two inches or less."

We believe the rationale for using a ½ to 8 inch depth for measuring frozen ground is reasonable and practical. This depth matches the crop root zone

and application depth of most equipment that would be used in winter application. Further, the frozen soil condition at this depth can be readily determined by a producer.

Iowa regulations, like the Illinois EPA proposal, severely restrict application to frozen ground. Iowa's regulation at Section 567-65.3(4) applies the definition of frozen ground as follows:

"Surface application of liquid manure on frozen or snow-covered ground.
A person who applies liquid manure on frozen or snow-covered ground shall comply with applicable NPDES requirements pursuant to the federal Water Pollution Control Act, 33 U.S.C. Chapter 26, and 40 CFR Parts 122 and 412, and also shall comply with the following requirements:

a. Snow-covered ground.
During the period beginning December 21 and ending April 1, a person may apply liquid manure originating from a manure storage structure that is part of a confinement feeding operation on snow-covered ground only when there is an emergency.

b. Frozen ground.
During the period beginning February 1 and ending April 1, a person may apply liquid manure originating from a manure storage structure that is part of a confinement feeding operation on frozen ground only when there is an emergency."

Since climatic conditions may provide frozen soil condition (even in southern parts of Illinois) sooner than February 1, we believe a more reasonable view of weather conditions should account for frozen soil conditions from December 1 through April 1. Further, we sought to avoid emergency situations at the outset by setting up a process by which the producer would be able to document the available storage at the start of the winter season. In that sense we believe the Illinois proposed rule is consistent with the Iowa approach on winter spreading, as Iowa views an emergency as "unforeseen circumstances [that] must be beyond the control of the owner of the confinement feeding operation, including but not limited to natural disaster, unusual weather conditions, or equipment or structural failure." Iowa further specifies that an emergency cannot be "caused by the improper design or management of the manure storage structure, including but not

limited to a failure to properly account for the volume of the manure to be stored." Again, this is consistent with our proposal.

15. Section 501.262. Incorporation. Currently, the definition reads: "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 this soil."

(a) Does the definition allow for the use of newly developed tillage tools, or those yet to be developed, that may incorporate livestock waste with minimal soil disturbance?

The definition will allow the use of such tillage tools if they can meet the proposed definition for incorporation.

(b) How will the proposed definition be interpreted when there is a rain event within 24 hours of application, but incorporation was nonetheless accomplished?

Infiltration of livestock waste into the soil by rainfall will not be considered incorporated under this definition.

16. Section 501.295. Livestock Waste. Currently, the definition reads: "Manure, litter, process wastewater, overflow from watering systems, wash waters, sprinkling waters from livestock cooking, precipitation polluted by falling on or flowing onto an animal feeding operation and other materials polluted by livestock, including but limited to sludge and contaminated soils from storage structures. Livestock waste does not include agricultural stormwater discharge." This definition is much different than the current Illinois and federal definitions of Livestock Waste - and includes such new concepts as "contaminated soils" - concepts that are confusing in the context of the Clean Water Act.

(a) How is the IEPA's proposed definition different than the federal definition of livestock waste? Why is it different?

The federal CAFO rule does not define or use the term "livestock waste." The federal rule refers to "manure, litter and process wastewater." The Agency has attempted to combine the federal terminology into the existing term "livestock waste."

(b) How will the IEPA interpret "contaminated soils" in the context of this definition and its regulation of CAFOs?

The phrase "sludge and contaminated soils from storage structures" in the proposal does not expand the current definition of livestock waste under Subtitle E but clarifies its meaning by providing a non-exhaustive list of examples of the meaning of the phrase "other materials polluted by livestock" in the existing definition. The phrase "contaminated soils from storage structures" generally refers to soils in earthen lagoons which may be

removed from the lagoon along with the manure, litter and process wastewater and should be disposed of in the same manner as other livestock waste.

(c) How does the IEPA differentiate between livestock waste, as here defined, and agricultural stormwater?

Agricultural stormwater is excluded from the definition of livestock waste and defined in the federal CAFO rule and Section 502.102(b) of the Agency's proposal. The key elements of the definition are that it is a discharge from a land application area caused by precipitation where the livestock waste has been properly applied.

17. Section 501.401. Purpose and Scope of Operational Rules for Livestock Management Facilities and Livestock Waste-Handling Facilities.

(a) Section 501.401(b). How will the IEPA evaluate whether a producer has made such a self-evaluation? If the producer does so, and draws a different conclusion than IEPA as to permit applicability, will he be charged with a violation of this rule?

The proposed part of Section 501.401(b), requiring the producer to make a site specific determination conceding the need for an NPDES permit, is based on a similar requirement in the federal rule. The federal preamble states that the owner and operator must make a case-by-case evaluation "as to whether the CAFO discharges from its production areas or land application area based on the actual design, construction, operation and maintenance." (73 Fed. Reg. 70423 (Nov. 20, 2008))

If the Agency arrives at a different conclusion, the producer may discuss this with the Agency prior to submitting an application to clarify why an application is required, what constituted a discharge at this location and whether corrective actions would be useful in legitimately precluding the requirement to obtain a permit. Failing that, the producer could appeal the permit before the Illinois Pollution Control Board once it is issued.

(b) Section 501.401(d). How will the IEPA determine whether runoff or overflow from a livestock facility causes a water quality violation? How is the agricultural stormwater exemption relevant to this determination? In the context of a nonpoint source, as here, where does the IEPA believe it is appropriate to sample - such that analytical results will be reflective of an actual water quality violation as to surface waters regulated by the Clean Water Act?

The receiving stream can be sampled and the chemical constituents determined relative to existing water quality standards. Some of the

indicators of contamination from livestock waste are ammonia, bacteria, suspended solids, and dissolved oxygen. In most cases of livestock waste discharge, the concentration of these constituents downstream violate the water quality standards and are also elevated relative to upstream sites on the same waterway.

The agricultural stormwater exemption may apply if the discharge is from land application fields and if the application rate was consistent with agronomic rates set forth in the facility's NMP. The runoff in that case would have been caused by an unforeseen precipitation event, not by over-application or a mechanical failure, such as a pipeline break.

18. Section 501.404(c). Handling and Storage of Livestock Waste.

(a) Please explain whether the proposed change would include chronic storm events or only those meeting the 25-year standard in a 24 hour period.

The proposed change simply clarifies that the requirements of this Section only apply to non-discharging, unpermitted CAFOs. Permitted CAFOs must follow the requirements in Part 502.

(b) How does this change relate to the federal CAFO rules?

As explained in question 18(a), this change is intended to conform the current regulations to the federal CAFO rules by applying the comparable requirements from the federal rule to permitted facilities.

19. Section 501.405. Field Application of Livestock Waste.

(a) Please explain how this provision will be applied to non-discharging facilities that are not required to be permitted.

The existing provisions in Section 501.405 (a) and (b) currently apply to non-discharging facilities.

(b) Please explain how this provision segues with Section 502.305 and, more generally, Part 502, Subpart F.

Section 501.405 is a Board regulation. Existing Section 502.305 authorizes the Agency to develop criteria for livestock management and livestock waste handling facilities subject to Subtitle E. Currently, Agency criteria regarding field application of livestock waste has been adopted under 35 Ill. Adm. Code 560.

20. Section 502.101. NPDES Permit and Duty to Maintain Permit Coverage.

(a) Section 502.101(b)(1) appropriately mirrors the USEPA CAFO rule preamble that states that a past discharge does not necessarily trigger a future permit obligation, since the producer could have corrected the problem that gave rise to the discharge. Please explain the circumstances under which the IEPA would be willing to accept a Compliance Commitment Agreement (related to a discharge violation) that does not require a producer to seek an NPDES permit.

There are many types of discharges that could be the cause of a violation notice and yet would not require a permit as part of the Compliance Commitment Agreement. One-time occurrences, such as mechanical failures, can be corrected in such a way that would insure that similar incidents would not likely occur (e.g., a pipe that ruptures while carrying livestock waste from a storage unit to the field application site). Requiring a permit in such a case would not add speed or technical certainty to resolving the problem and assuring that it cannot happen in the future.

(b) This provision, at section (f) appears to require a farm to have a permit for all types of livestock production, not just that production which results in a discharge. Is this a correct reading? Can the IEPA explain a situation where this provision would be relevant?

The interpretation is correct—all livestock waste at a CAFO must be addressed by the permittee regardless of which livestock species were the basis for determining that an NPDES permit was required. For example, a producer has a small dairy operation at the same location as a large swine confinement facility. While the decision to require an NPDES permit was based on a discharge from the swine operation, the livestock waste from the dairy operation is also subject to the permit.

21. Section 502.615. Phosphorus

(a) How is this section different than existing state regulations (pursuant to the LMFA) regarding land application nutrient standards? How are those differences reconciled, legally?

The provisions of the proposed regulations that are the same as or similar to the LMFA are noted in the Technical Support Document (pages 22-26). The Agency is not aware of a situation where these two separate requirements would prevent compliance with the other; therefore, a CAFO operator should be able to comply with both requirements legally. The Agency believes that the provisions to be adopted under this proposed Subtitle E cannot be limited by the Livestock Management Facilities Act (510 ILCS 77/100 (2012)). Section 100 of the Livestock Management Facilities Act states "Nothing is this Act shall be construed as a limitation or preemption of any

statutory or regulatory authority under the Illinois Environmental Protection Act."

(b) Has the IEPA consulted with NRCS or other agricultural experts in the development of the proposed nutrient standards? If so, please explain how.

Brett Roberts and Matt Robert of USDA-NRCS and Ted Funk of the University of Illinois participated in the work group regarding development of the proposed Section 502.615 regulation.

(c) Has the IEPA reviewed other state's nutrient standards? How does this proposed rule compare to those found in other states?

In the work group, in which the Agency participated, regarding development of phosphorus standards, several nutrient standards for land application of livestock waste in other states were reviewed. The states included in that review were: Wisconsin, Iowa, Michigan, Minnesota, Ohio, Indiana, Oregon and Missouri. The Agency also reviewed the states of Kentucky, Colorado, and North Carolina with regard to use of the P-index. Of those states the following use a P index to determine application rates and practices for land application of livestock waste from permitted CAFOs: Iowa, Wisconsin, Kentucky, Ohio, Minnesota, Missouri, Oregon, Colorado and North Carolina. The following states do not have a P-index in their permitted CAFO technical standards but use other methods to assess for phosphorus at land application sites: Indiana and Michigan. Several of the states listed have screening criteria to screen sites to determine if the P-index must to be used. Indiana and Michigan have screening criteria to determine if indexes must be used for assessing manure, nutrient or sediment transport from the fields. The proposed Subtitle E regulations do not propose a P-index.

(d) In Section 502.515(d)(2)(F) and (e)(2)(D), please comment on how a producer demonstrates "consideration of multi-year phosphorus application."

The determination of phosphorus application rates under these rules would be demonstrated in the NMP submitted in the NPDES permit application or in changes to the NMP submitted to the Agency. To meet this provision of Section 502.515(d)(2)(F) and (e)(2)(D) for permitted CAFOs subject to Subpart F, the nutrient management plan will need to meet 502.615 and 502.625 regarding multi-year phosphorus application. Permitted CAFOs subject to Section 502.505 and 502.510 regarding development of nutrient management plans will be subject to Sections 502.505(m) and 502.510(b)(1) regarding multi-year application rates. Meeting the provisions of 502.615, 502.625, 502.505 and 502.510 will provide for consideration of multi-year application rates.

ILLINOIS EPA'S ANSWERS TO THE PREFILED QUESTIONS OF ENVIRONMENTAL GROUPS DIRECTED TO SANJAY SOFAT

1. Have you reviewed USEPA's 2012 Final Action on the 2011 Proposed NPDES CAFO Reporting Rule, published July 16, 2012?

Yes, the Agency has reviewed US EPA's 2012 final action on the 2011 proposed NPDES CAFO reporting rule, published in 77 Fed. Reg. 42679 (July 20, 2012).

2. Page 92 of the Statement of Reasons states that IEPA has met with USEPA to resolve USEPA's concerns about the draft rule. What changes were recommended by USEPA?

On December 1, 2010, the Illinois EPA submitted to USEPA a draft of the proposed revisions. A copy of the December 1, 2010 proposed revisions is attached to these responses as Attachment 6a. On January 14, 2011, the Illinois EPA received comments from USEPA based on the December 1, 2010 draft. A copy of USEPA's comments is Attachment 6b.

On May 17, 2011, the Illinois EPA submitted to USEPA a revised draft of the proposed revisions, after consideration of USEPA's comments. A copy of the May 17, 2011 proposed revisions is Attachment 7a. On June 3, 2012, the Illinois EPA received additional comments from USEPA based on the May 17, 2011 draft. A copy of USEPA's comments regarding these revisions is Attachment 7b.

a) What changes were made to the rule as a result of those recommendations?

Please compare Attachments 6a, 6b, and 7a to determine what changes resulted from USEPA's comments received on January 14, 2011.

Please compare Attachments 7a, 7b and the proposed changes to Parts 501 and 502 filed in this rulemaking to determine what changes resulted from USEPA's comments received on June 3, 2011.

b) Does the draft rule incorporate all of the changes recommended by USEPA?

The Agency did not accept all of USEPA's initial recommendations, but USEPA has indicated that the Agency's proposal is federally approvable.

3. Do you agree that the Illinois Environmental Protection Act governs pollution into waters of the state?

Yes, Title III of the Illinois Environmental Protection Act governs water pollution.

4. Does IEPA issue NPDES permits to non-CAFO point source dischargers that discharge into waters of the state?

The Illinois EPA issues NPDES permits to point sources that discharge pollutants to waters of the United States.

5. How are waters of the state defined?

Under the Environmental Protection Act, waters is defined as "all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this State."

6. How does the definition of waters of the U.S. differ from the definition of waters of the state? What waters are excluded?

A simple way of responding to this complex question would be to say that not all waters identified in the definition of "waters" in the Act and Board regulations are waters of the United States. For example- an accumulation of water underground, or groundwater, is not waters of the United States. The waters of the United States are waters defined in 40 CFR 122.2, as interpreted by decisions of the Supreme Court.

7. Does IEPA have a process in place to distinguish waters of the US from waters of the state?

No, the Agency does not have a single program to determine if every individual water body is a water of the United States or a water of the State. This analysis is performed on an as needed basis by field inspectors, permit writers and surface water monitoring and assessment staff.

8. In this rulemaking why did IEPA choose to use the term waters of the US rather than waters of the state?

The primary objective was to provide clarity on the issue of when an NPDES permit is required under Part 502 of the Agency's proposal. Section 12(f) of the Act provides that "No permit shall be required under this subsection and under Section 39(b) of this Act for any discharge for which a permit is not required under the Federal Water Pollution Control Act." Consistent with this language in Section 12(f) of the Act, the Agency is clarifying that only those discharges that discharge into waters of the United States are required to obtain an NPDES permit under the Act. Consequently, discharges into waters of the state that are not waters of the United States are not required to obtain an NPDES permit.

ILLINOIS EPA'S ANSWERS TO THE PREFILED QUESTIONS OF ENVIRONMENTAL GROUPS DIRECTED TO BRUCE YURDIN

QUESTIONS REGARDING INSPECTION/COMPLIANCE:

1. How much livestock waste is generated in Illinois each year? How does that compare to the amount of human waste (sewage) that is generated each year?

We are unaware of any reliable, current estimates for the total amount of livestock waste generated in Illinois on an annual basis. Therefore, we are unable to compare the amount of livestock waste to human waste that is generated each year.

2. What pollutants does livestock waste contain? How do these pollutants affect water quality for human health (recreation, drinking water) and aquatic life?

The pollutants associated with livestock waste are generally those attributable to all warm blooded animals: bacteria, viruses, nutrients such as nitrogen and phosphorus, and oxygen demanding materials that deplete affected waters and result in the loss of dissolved oxygen. In addition, veterinary pharmaceuticals, disinfectants used in washing the surfaces of walls and floors where animals are housed and in dairy lines and tanks are also present.

All of the pollutants listed here can adversely affect human health and water quality unless they are adequately degraded or treated. In general, the over abundance of nutrients can cause eutrophication and the depletion of oxygen of sufficient concentration to support aquatic life. Oxygen demanding materials have similar impact to aquatic life, limiting the usable habitat. Algal blooms may occur due to eutrophication, adversely affecting recreational opportunities and drinking water taste and odor, and increasing the presence of harmful trihalomethane precursors.

3. Have livestock operations been documented as a source of water quality impairments in Illinois? If so, to what extent?

Yes. Every two years as required by the federal Clean Water Act, the Illinois EPA publishes the 305(b) Report concerning the condition of waters in Illinois. Causes and sources of impairment of water quality that adversely affect designated uses, such as recreation and drinking water uses, are

documented. These reports are published on the Illinois EPA's web page at http://www.epa.state.il.us/water/water-quality/index.html.

4. What instances of water pollution has IEPA documented from livestock operations in the state?

The Livestock Annual Summary for each year, 1999 through 2009, are available on the Agency's web site at http://www.epa.state.il.us/water/cafo/reports/index.html . The summaries contain information on the investigations for each year conducted by the Agency.

5. How many fish kills has IEPA documented from livestock facilities from 1999-2009[1]?

The Livestock Annual Summary for each year, 1999 through 2009 are available on the Agency's web site at http://www.epa.state.il.us/water/cafo/reports/index.html . The summaries contain information on the investigations for each year conducted by the Agency. Attachment 1 of each report contains information on that year's fish kills attributed to livestock waste releases.

There have been a total of 36 documented fish kills related to livestock in the years 1999 through 2009. The least number per year was 0 and the largest number per year was 8.

6. Does IEPA know of instances where livestock waste has been discharged to surface waters via tile drains?

Yes, instances of tile drain discharges of livestock waste from production areas and land application fields have been investigated and confirmed.

7. In the past ten years, what is the average annual percentage of livestock operations that are inspected by the Illinois EPA that are found to have at least one regulatory violation?

a) In the past ten years, how many inspected facilities were found to be in violation for having discharged without an NPDES permit?

For the years 2001 to 2010, the average annual percentage of livestock operations we inspected that were found to have at least one violation is 52.8%. At the time of the inspection over that same period, the total number of facilities found to be in violation for not having an NPDES permit is 248. We note however, that over this same period the regulation by which the

[1] IEPA may elect to share data beyond that decade or from a more recent decade, so long as the data are representative of conditions in the state.

determination as to which facility may need a permit was revised by the finding of the federal courts in *Waterkeeper v. USEPA*, 399 F.3d 482 (2nd Cir. 2005) and *National Pork Producers Council v. USEPA*, 635 F. 3d 738 (5th Cir. 2011). Finally, the number of livestock facilities initially thought to need a permit includes those facilities that through compliance and enforcement measures eliminated the discharge originally found during our inspections.

8. In the past ten years, how many livestock operations has the IEPA documented as causing water pollution in Illinois?

[There is no 8(a) in this document]

(b) How many of these facilities had NPDES permits when the IEPA initially discovered that they had caused water pollution?

Of the facilities inspected between 2001 and 2010, approximately 316 were found to be causing a potential violation of the water quality standards. None are believed to have had an NPDES permit.

9. How does the IEPA typically discover that an unpermitted livestock operation has caused water pollution?

The Agency visits over one-hundred sites each year, many of them being visited for the first time. Water pollution issues may be found during those visits. Citizen complaints of water pollution also result in Agency visits that may confirm cases of water pollution.

10. Is it possible that there have been other incidents of water pollution caused by livestock operations that were not discovered by IEPA?

Yes.

QUESTIONS REGARDING REPORTING/RECORDKEEPING/INVENTORY OF FACILITIES:

11. How many livestock operations are there in the state of Illinois?

The Agency has no information on which to base an estimate.

12. For what percentage of Illinois livestock operations does IEPA have complete and current information regarding the location, the number and type of animals housed, annual waste production, available land application acreage and types of waste storage structures?

The type of information list here would only be available to the Illinois EPA through inspections and permitting. The Agency has conducted inspections

at approximately 125 individual livestock facilities annually over the last 20 to 25 years. We have also issued approximately 35 permits.

13. Under the current rules, what percentage of Illinois livestock operations have a waste management plan that has been reviewed and approved by IEPA?

At this time there are approximately 35 NPDES permits issued to CAFOs. All of those have approved NMPs that have been reviewed by Agency staff.

14. What percentage of livestock operations in Illinois does IEPA estimate will require NPDES permits under the draft rule?

The federal CAFO rule, as interpreted by the federal courts, requires that only livestock facilities that have actual discharges obtain permits. Since any determination regarding actual discharges must be based on on-site inspections at any given facility, knowing the total number of livestock farms in the state does not assist in making an estimate of those that might need an NPDES permit. Species specific information, such as the number of dairy farms in the state, would also not provide an answer since, short of making an inspection to document a discharge, there is no way to establish how many are CAFOs and not AFOs. In short, there is no reasonable and reliably accurate method to make an estimate of the number of permits that must be issued.

15. What percentage of large CAFOs does IEPA estimate will require NPDES permits under the draft rule?

As stated above, there is no reasonable and reliably accurate method to estimate the number of large CAFOs that will require permits.

16. Aside from what is proposed in the draft rule, what other approaches to a livestock facility inventory has IEPA considered? Has IEPA considered adopting Minnesota's approach to livestock facility inventory, found at MN ADC 7020.0350?

The Agency considered a variety of approaches during the drafting stages including the Minnesota approach.

17. Page 90 of the Statement of Reasons states that IEPA "is attempting to construct [a CAFO] inventory from an Illinois Department of Public Health database of over 800 dairy operations which are inspected by that agency and a list of 1400 permits that have been issued by the Illinois Department of Agriculture under the LMFA since 1996." Do either of these data sets represent the complete universe of CAFOs in Illinois?

a) What will IEPA have to do to merge these data together?

b) How can IEPA ensure that a comprehensive inventory of facilities subject to this regulation will result from this effort?

We believe that the two sources of information on livestock facilities—the IDPH dairy dataset and the LMFA dataset—provide a good starting point to begin the necessary work to prioritize inspections of known facilities. The datasets have been merged electronically and are in use by Agency staff. While the proposed rule was under development, USEPA was in the process of proposing a rule that would have required the registration of either all or a portion of the livestock facilities in the nation. Earlier this summer, USEPA elected to forego that effort in favor of a project involving the collection of datasets from the states, such as those mentioned above. As our response to a previous question indicates, knowing the universe of livestock facilities in the state, though useful in terms of prioritizing inspections, would not address the question of which ones or how many would need permits. Under the federal court's view, only those with actual discharges need permits and that can only be established through inspections, not by way of a registration.

18. How do the proposed regulations allow IEPA to know whether multiple CAFOs (either permitted or unpermitted) are land-applying on the same fields?

The proposed regulations do not specifically address this matter.

QUESTIONS REGARDING WINTER MANURE APPLICATION:

19. Is it common for livestock operations in Illinois to land apply on frozen, snow-covered, or ice covered ground?

a) How many livestock operations do you estimate land apply on frozen, snow covered, or ice covered ground?

The Illinois EPA has no information that may be used to determined if application on frozen, snow or ice covered ground could be considered common or how many facilities use this practice.

20. Is there any agronomic benefit to winter land application of manure?

There is agronomic benefit from winter land application although it is less than the benefit that would occur later in the plant schedule (e.g., April through May). Nutrient losses from early winter into late spring, depending on the planting date, would be appreciable when 1) weather conditions result in high temperatures in the soil application zone and 2) excessive rainfall results in either nitrogen loss by way of percolation and removal through drainage tiles or in nitrogen and phosphorus loss due to surface erosion across the application field.

21. What are the potential environmental risks of winter land application of manure?

a) What are the potential environmental risks when manure is injected and/or incorporated?

Winter application of livestock waste can adversely affect both surface water and groundwater. Nutrients and bacteria can be released in significant quantities. The very high oxygen demand of the waste can lower dissolved oxygen in surface waters. These risks can be reduced through injection or incorporation of the waste into the soil, to the extent that frozen soil or snow or ice cover allows.

22. Is IEPA aware of water pollution that has occurred as a result of land application by livestock operations during winter conditions? Please explain.

a) What are some of the common reasons winter land application results in discharges to surface waters?

The Illinois EPA has observed several instances of livestock waste pollution that occurred following winter application. As is normally the case, water pollution was documented through the collection and analysis of stream samples. The reasons for these water pollution incidents were frequently related to runoff from surface application to frozen, snow or ice covered ground caused by changes in air and ground temperature.

23. Are you aware of livestock operations that have had regulatory violations due to winter application?

a) If so, how many of these were following a nutrient management plan or a winter application plan?

The Agency is aware of facilities that have been cited for water quality violations due to runoff from winter application. We have no database that

allows us now to record how many facilities were using a NMP or winter application plan so we cannot estimate how many were following their plans.

24. Do the proposed regulations cap the winter application rate?

The Illinois EPA's proposal does not place a cap on winter application rates. We do propose that setback distances to receiving streams and other sensitive areas be increased to reduce the potential for runoff from surface application.

a) Are you aware of regulations in other Midwestern states that restrict winter application rates?

Indiana DEM and Iowa DNR restrict winter application in much the same way as the Illinois EPA proposal but do not contain a rate restrictions (Indiana DNR 327 IAC 19-14-4; Iowa Chapter 65.3(4)). Michigan DEQ requires application to fields that will not create runoff but does not restrict application rates specifically ("Technical Standard for the Surface Application of Concentrated Animal Feeding Operations Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection", April 19, 2005). Wisconsin DNR rules provide a restriction on winter application rates for liquid manure (Wisconsin Chapter NR 243.14(7)). Application is allowed only under defined emergencies and is otherwise prohibited. In the case of an emergency, application rates are restricted based on field slope—a maximum rate of 7000 cumulative gallons per acre for fields with 0 to 2% slopes, 3500 cumulative gallons for fields with 2 to 6% slopes and no application can occur for fields with more than 6% slopes. Additional limitations based on phosphorus (as P_2O_5) also apply.

25. What benefits does IEPA anticipate will result from the requirement that CAFOs develop and follow a winter manure application plan?

The requirements in Section 502.630 were developed to achieve two results. First, the producer is required to make a calculation by December 1st concerning the available storage volume. With this information and the understanding that winter spreading via surface land application is prohibited without that calculation and unless certain other conditions are met, the producer is placed in a better position to avoid winter spreading unless unforeseen circumstances arise. Second, the winter spreading provisions proposed in this rule specify reasonable and practical best practices that must be followed in the event that winter spreading could not be avoided.

26. What practices would be considered "practical alternative measures" to surface application under proposed section 502.630 (a)(1)(A)?

Practical alternative measures to avoid surface land application in winter could include, but are not limited to, removing livestock waste to storage units at another site, reducing other sources of flow (e.g., stormwater runoff) to the existing storage units and reducing the volume of manure that would be produced by reducing the size of the herd.

27. What is IEPA's basis for choosing December 1st as a deadline for providing storage capacity as required under proposed section 502.630(a)(1)(C)?

As stated on the Technical Support Document, the 120 days from December 1 through April 1 is the critical winter period when soil condition would favor frozen and snow or ice covered conditions. Since most fall livestock waste application concludes in November following harvest, the calculation of available storage should be done at that time. That calculation provides the producer with an estimate of the capacity on hand and the volume that will need to be stored over the following four months (although there is no reason the calculation could not be done earlier in the season, say on November 1 or 15, with dates and volume adjusted accordingly). Calculating the volumes after December 1 might suggest a reliance on favorable weather conditions after that time that we believe should not be relied upon.

28. What does it mean for a livestock operation to have "taken steps to provide 120 days of available storage capacity," as required in 502.630(a)(1)(C) of the proposed rules? What is actually required by this provision?

By stating in Section 502.630(a)(1)(C) that "the owner or operator has taken steps to provide 120 days of available storage capacity" we mean that the producer must have conducted livestock waste removal, by means of land application or transfer to another party, in accordance with their NMP.

29. Under the proposed rules, will unpermitted large CAFOs be required to submit their winter manure application plans to IEPA?

No. An unpermitted large CAFO will need to maintain a winter application plan and keep other records in order to claim the agricultural stormwater exemption. Unpermitted large CAFOs claiming the agriculture stormwater exemption must show compliance with Section 502.510(b), including the provision to develop a winter land application plan, as specified in subsection (b)(12).

30. Under the proposed rules, will IEPA review and approve winter application plans for unpermitted large CAFOs prior to surface applying on frozen, ice-covered or snow-covered ground?

No. Only permitted CAFO applications in their entirety and the facility's winter plan will be reviewed and approved, prior to permitting and prior to winter application. If an unpermitted CAFO had a discharge from a land application field and claimed the agricultural stormwater exemption, the facility's winter plan would then be reviewed by the Agency.

31. How will IEPA ensure that the six field requirements for a winter manure application plan (listed in Section 502.630 (b)) are met by an unpermitted Large CAFO?

Only the applications of permitted CAFOs will be reviewed by the Agency. The proposed rule does not allow for the review of the winter land application plan from unpermitted large CAFOs.

32. How will IEPA ensure that, where practical alternatives do not exist, unpermitted Large CAFOs have appropriate land available for winter manure application?

The intention of the regulation as a whole does not confer plan review and approval to the Agency for unpermitted large CAFOs. Unless and until an unpermitted large CAFO is determined to need a permit, plans will not be reviewed unless those plans are reviewed 1) as part of an Agency inspection or 2) following a release from the unpermitted CAFO as a result of which the facility claims the discharge was exempt because of the agricultural stormwater exemption.

ILLINOIS EPA'S ANSWERS TO THE PREFILED QUESTIONS OF ENVIRONMENTAL GROUPS DIRECTED TO DANIEL HEACOCK

QUESTIONS REGARDING PRODUCTION AREA SETBACKS:

1. In the last ten years, about how many livestock operations has IEPA found discharging pollution from their production areas to nearby surface waters?

a) Why do such discharges usually occur?

Of the facilities inspected between 2001 and 2010, approximately 316 were found to be causing a potential violation of the water quality standards. The Agency's annual summaries of livestock inspections indicate numerous sources of such discharges. Among the most frequently found are feedlot runoff, pit discharges, lagoon or holding pond overflows and field application runoff.

b) What is the greatest distance between a surface water and a production area from which IEPA has documented a discharge?

While measurements or estimates (recorded and documented with maps and photographs) are made for the record at each discharging livestock facility, we do not compile the information on the longest length between a release point and the receiving stream.

c) Have there been instances of production areas becoming flooded or damaged due to high water levels in nearby surface waters?

Instances of flooding in the production area are case-specific. While flooding has been known to occur, no number of instances has been tabulated.

2. Do existing regulations require a minimum buffer or setback between surface waters and livestock production areas?

a) Are there waste storage structures in Illinois that are located next to surface waters?

Existing regulations in Subtitle E that are administered by the Illinois EPA do not provide for a setback between the production area and surface waters. We have inspected livestock operations in Illinois with livestock waste handling facilities adjacent to surface waters.

3. Is IEPA aware of water pollution from the production area of any livestock operation contaminating nearby wells?

a) If so, why do such discharges usually occur?

It is often difficult to attribute well contamination directly and solely to a livestock facility when other sources with similar potential impacts to groundwater are also present. In any event, discharges have been noted concurrent with well contamination, and in those cases, the problems at the livestock production area are generally attributable to feedlot runoff and manure storage issues.

b) Have there been instances where wells located more than 200 feet from a production area have been contaminated by livestock waste?

Yes. Those instances are few in number and as mentioned above can be difficult to identify as being the result of livestock waste alone, and not caused by other sources of contamination.

c) At what percentage of livestock operations in Illinois is groundwater monitoring required around the production area?

Of the approximately 35 facilities where a NPDES permit has been issued, none are required to monitor groundwater according to the NPDES permit.

d) At what percentage of livestock operations in Illinois has IEPA ever done monitoring to determine whether waste storage structures are leaking into groundwater?

In a few cases in which groundwater impacts were believed to be a potential problem, the Agency relied on well monitoring data developed under the LMFA, from wells installed by the producer as part of their LMFA permit.

4. Has IEPA considered a 1000 foot siting setback from community water supply wells, as has been adopted by Minnesota (Minn. R. pt. 7020.2005, Subp. 1) and Wisconsin (NR 243.15)?

Setback zones have been established in the Illinois Environmental Protection Act for community water supply wells. The location of new livestock waste handling facilities within the minimum setback zones is prohibited unless an exception is granted by the Illinois Pollution Control Board under Section 14.2 of the Illinois Environmental Protection Act.

Section 3.335 of the Illinois Environmental Protection Act defines a potential secondary source as "any unit at a facility or a site not currently subject to a removal or remedial action, other than a potential primary source, which ….(6) is utilized for handling livestock waste."

Section 14.2 of the Illinois Environmental Protection Act prohibits the location of new potential secondary sources within the minimum setback zones of community water supply wells defined as 200 feet or 400 feet. The minimum setback zone is 400 feet for community water supply wells deriving water from an unconfined shallow fractured or highly permeable bedrock formation or from an unconsolidated and unconfined sand and gravel formation. The Agency maintains a directory of all community water supply wells to which the 400 foot minimum setback zone applies.

The Agency has not considered establishing a 1000 feet siting setback for community wells under Subtitle E.

5. What evidence is there that a 75-foot setback will prevent the discharge of waste from temporary manure stacks into water wells?

The proposed 75 feet setback distance from water wells is intended to make the rule consistent with the Illinois Department of Public Health rules. Page 37 of the Statement of Reasons provides details regarding the establishment of setback zones for potable water supply wells under Section 14.2 of the Illinois Environmental Protection Act. These minimum setback zones are 200 or 400 feet for potable wells. Additional measures proposed in Section 501.404(b)(3) are required to prevent runoff and leachate from entering groundwaters.

6. How does IEPA expect producers to determine whether a cover or pad for temporary manure stacks is "needed to prevent runoff and leachate from entering surface waters and groundwater"?

The producer will need to make this determination based on the conditions at the storage site such as soil type, land slope, vegetative buffers, and proximity to surface waters, the temporary nature of the manure storage site and expected weather conditions during the temporary storage period.

QUESTIONS REGARDING LAND APPLICATION SETBACKS:

7. What is the basis for selecting 200 feet as the proposed land application setback from potable water supply wells?

The Agency is using the same setback from potable supply wells as is used in the existing NRCS standard 633 which prohibits livestock waste application within 200 feet of water wells.

a) Is IEPA aware of instances where water wells in Illinois have been contaminated from livestock waste from land application areas?

Illinois EPA is aware of at least one case in which a potable well was contaminated by livestock waste.

b) If so, what is the greatest distance between a well and a land application area from which IEPA has documented a discharge?

The Agency is unaware of the precise distance.

c) Has IEPA reviewed regulations from Indiana (327 Ind. Admin. Code 16-10-4) and Wisconsin (Wisc. Admin. Code NR 243.14(2)(b)(9)) governing land application setbacks from water supply wells?

No.

8. Does the land application setback apply to all water wells?

Section 502.645(e) provides: "Livestock waste shall not be land applied within 200 feet of potable water supply wells." This set back does not apply to all water wells because not all water wells are used for human consumption.

9. Has IEPA documented any instances where discharges to surface waters have resulted from land application of livestock waste further than 200 feet from that surface water?

a) If so, how does livestock waste typically reach surface waters?

Overland flow of livestock waste has been observed entering surface waters several hundred feet from the edge of a field where land application occurred. Several factors can account for this, including the slope of the ground, soil type, application amount and method, weather conditions prior to, during and shortly after land application, the presence of frozen or snow and ice covered ground, thawing of frozen soil conditions and the occurrence of rainfall. The presence of field tiles has also served to transport livestock waste greater than 200 feet from the point of land application.

10. How does IEPA verify that livestock waste is being applied at agronomic rates and consistent with existing setback regulations?

Section 502.325(9) through (13) requires the data needed to verify in the annual report to the Agency that livestock waste was applied that year at the approved agronomic rate. While not provided directly to the Agency,

information on compliance with the applicable setbacks would be available for review through the records kept by the CAFO under Section 502.320(w).

QUESTIONS REGARDING MANURE APPLICATION RATES:

11. What depth of soil sampling does the proposed rule require to be consistent with the Illinois Agronomy Handbook?

The soil sampling protocol must meet proposed Section 502.635(a)(1) that requires the soil sampling to be in accordance with the 24th Edition of the Illinois Agronomy Handbook. The required soil depth for soil sampling for phosphorus is 7 inches as indicated on page 93 of the Illinois Agronomy Handbook.

12. Does the proposed requirement that application rates must be neutral when available soil phosphorus is over 50 pounds per acre (Section 502.615(d)) apply to both phosphorus-based rates of application and nitrogen-based rates of application?

The neutral phosphorus application rates in proposed Section 502615(d)(3) applies to phosphorus based application and not to nitrogen-based application. Nitrogen based application criteria under the proposed Section 502.615(c) do not contain a neutral phosphorus based application rate requirement.

13. The Illinois Agronomy Handbook (Attachment R to the Statement of Reasons, p. 102) states, "There is no agronomic advantage in applying P when P1 values are higher than 60, 65, and 70 for soils in the high, medium and low P-supplying regions, respectively." How does the proposed 300 lbs P/acre threshold soil phosphorus concentration for switching from nitrogen- to phosphorus-based application rates comport with the recommendation from the Illinois Agronomy Handbook?

The Illinois Agronomy Handbook recommendations for phosphorus application rates are based on the economics of crop production and obtaining maximum yields. Figure 8.5 and the discussion on pages 101 and 102 of the Illinois Agronomy Handbook shows that the typical Illinois crops will not have increased yields in response to increases of available soil phosphorus above the indicated soil test levels of 60, 65, and 70 pounds per acre. Therefore it is not recommended by the Illinois Agronomy Handbook that commercial phosphorus fertilizer be applied to land with the soil test levels exceeding 60,65, or 70 pounds per acre, as there will be no increase in crop yields from the field. The land application of livestock waste to provide agronomic nitrogen needs for corn, for instance, will result in application of phosphorus to the land. The usual ratios of phosphorus and nitrogen in

livestock waste and agronomic uptake of these nutrients by the crop will result in a multi-year application of phosphorus. Based on review of the data and technical literature it was determined that available soil test phosphorus levels could increase to 300 pounds per acre and be protective of surface water quality. The basis for the 300 pounds per acre available phosphorus limitation is further discussed in the technical support document, pages 24-26. The Illinois Agronomy Handbook recommends not to apply commercial phosphorus at an unnecessary cost to the producer with no agronomic benefit. The proposed Section 502.615(c) allows application of livestock waste to provide agronomic nitrogen needs of the crop and also be protective of surface water quality.

QUESTIONS REGARDING UNPERMITTED CAFOS:

14. What potential risks to water quality are posed by large unpermitted CAFOs?

Livestock waste contains pollutants such as nutrients, organic matter, solids, and odorous compounds. Nutrients include phosphorus and various forms of nitrogen. These contaminants may cause low dissolved oxygen or algal blooms which harm aquatic life. If the livestock waste is not properly handled and managed at the facility, these pollutants can be released to the environment. Unpermitted CAFOs thus have the potential to cause discharge of the above mentioned pollutants to surface waters. At these CAFOs, site specific nutrient management practices are necessary to ensure appropriate agricultural utilization of nutrients in the applied livestock waste. Without these practices, nutrient levels in the applied livestock waste, beyond the agronomic crop need, would tend to accumulate in soils. Under heavy rainfall events these accumulated nutrients will be released into the runoff from fields, which would enter streams, lakes and other surface waters, thus impacting the water quality of these waterbodies.

15. Are unpermitted CAFOs currently subject to regular inspections, monitoring, and reporting requirements?

Unpermitted CAFOs are not currently subject to regular inspections, monitoring and reporting requirements. Inspection and monitoring conducted by the Agency are based on several factors, including any known problem at the facility, the type of livestock housed, the design of the facility and any known operational and maintenance issues. If problems are noted as a result of an inspection, additional visits may be conducted. If serious problems are observed and continue, enforcement actions may be taken by

the Agency that result in additional inspections, monitoring and reporting of the specific problems we observed.

16. What portions of Subpart F in proposed Part 502 would unpermitted large CAFOs be subject to in order to claim the agricultural stormwater exemption?

Pursuant to 502.510(b), unpermitted large CAFOs are subject to Section 502.630 and 502.645(a) and the setbacks in Subpart F.

17. Why do the proposed rules require regular inspection of manure application equipment?

The Agency is proposing that the proposed rules contain the requirements of the federal CAFO regulations at 40 CFR 412.4(c)(4) that require inspection of land application equipment for leaks.

a) Do unpermitted CAFOs use similar equipment as that used by permitted CAFOs?

Yes.

QUESTIONS REGARDING WASTE TRANSFERS TO THIRD PARTIES:

18. Under the draft rules, when livestock waste is transferred to third parties, are the land areas where the third party land applies considered part of the permittee's nutrient management plan?

Off-site land application of livestock waste not under the control of the CAFO owner or operator is not part of the permittee's nutrient management plan, unless specified to be part of the CAFO owners or operator's approved nutrient management plan in the permit application.

19. Under 502.505(g) of the proposed rule, are off-site land application areas not owned or rented by the operator to be included in the scaled aerial photos or maps?

The nutrient management plan must include maps of the proposed land application areas. Maps of off-site land application areas that are not part of the nutrient management plan are not required to be submitted in the nutrient management plan. Location of each land application site of off-site recipients of livestock waste must be kept as records in accordance with proposed Section.

20. Are third-party manure applicators required to register their land application sites with IEPA?

No.

21. Are third-party land application fields subject to the technical standards of Subpart F of the proposed rule?

Off-site land application of livestock waste not under the control of the CAFO owner or operator is not subject to subpart F unless the land application area is part of the NPDES permittee's approved nutrient management plan.

22. Section 502.505(h) of the proposed rule doesn't require statements of consent with owners of land accepting livestock waste to include the duration of time that waste will be accepted. What if a transferee consenting to accept a vast majority of a facility's waste only consents to accept the waste for a period of one year? How would IEPA be able to verify that the CAFO has adequate land for waste disposal at alternate sites for the duration of the permit?

Section 502.510(b)(2) requires each nutrient management plan to specify and demonstrate adequate land application area for land application of livestock waste. Therefore during the review the nutrient management plan the applicant will have to specify and demonstrate in its nutrient management plan adequate land application area is available to land apply the CAFOs livestock waste. The Illinois EPA will review the nutrient management plan prior to approval under a NPDES permit. In the example given the applicant would need to obtain additional land for its land application area to complete its nutrient management plan.

23. Has IEPA considered implementing a livestock waste manifest program like the one adopted in Michigan's Large CAFO General Permit, (MIG019000)?

No the Agency did not consider any livestock waste manifest program in drafting this proposal.

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

PART 501
GENERAL PROVISIONS

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SUBPART B: DEFINITIONS AND INCORPORATIONS

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501.265	Lagoon
501.267	Land Application Area
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
501.312	Manure
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501.317	Maximum Feasible Location
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501.330	New Livestock Management Facility and New Livestock Waste-Handling Facility
501.333	New Source
501.335	NPDES
501.340	NPDES Permit
501.342	Non-farm Residence
501.343	Overflow
501.345	Owner/~~or~~ Operator
501.350	Person
501.355	Pollutant
501.356	Populated Area
501.357	Process Wastewater
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501.365	Silvicultural Point Source
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501.372	Supernatant
501.375	Temporary Manure Stack
501.377	Vegetative Buffer
501.378	Waste Containment Area
501.380	Water Pollution
501.385	Wet Lot
501.390	25-Year, 24-Hour Precipitation Event
501.395	100-Year, 24-Hour Precipitation Event

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

Section

AUTHORITY: Implementing and authorized by Sections 9, 12, 13, 21, 22 and 27 of the Environmental Protection Act [415 ILCS 5/9, 5/12, 5/13, 5/21, 5/22 and 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. 10592; amended in R90-7 at 15 Ill. Reg. 10075, effective July 1, 1991; amended at 34 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.

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 Waste 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.

Part 502 of this Chapter 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. This Part also contains requirements applicable to land application activities from AFOs which are defined as Large CAFOs and are not permitted under an NPDES permit.

Part 503 of this Chapter contains the requirements applicable to fish and aquatic animal production facilities, irrigation activities, and silvicultural activities and sources.

The Part 506 rules implement the Livestock Management Facilities Act [510 ILCS 77]. These rules and the Livestock Management Facilities Act are administered by the Department of Agriculture.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART B: DEFINITIONS AND INCORPORATIONS

Section 501.200 Incorporations by Reference

a) The Board incorporates the following material by reference:

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

"Control of Manure Odors," ASAE EP379.1 (December 1986).

"Design of Anaerobic Lagoons for Animal Waste Management," ASAE EP403.1 (March 1990).

"Illinois Agronomy Handbook, 24th Edition". University of Illinois, College of Agriculture, Consumer and Environmental Sciences. Urbana, IL, July 2009.

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

"Manure Characteristics". Section 1. Second Edition MWPS-18. MidWest Plan Service. 2004.

NCR. North Central Region-University of Missouri Soil Testing Lab, 23 Mumford Hall, University of Missouri Columbia, MO 65211, "Recommended Chemical Soil Test Procedures for the North Central Region", North Central Regional Publication No.221, Missouri Agr. Exp. Stn. Bul. SB 1001, 5 January 1998.

b) This Section incorporates no later editions or amendments.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

~~SUBPART B: DEFINITIONS~~

Section 501.201 Definitions

a) Except as hereinafter stated 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 Parts 501, 502 and 503.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 501.222 Agricultural Stormwater Discharge

A precipitation-related discharge of livestock waste from the land application area of an AFO where the livestock waste has been land applied in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of nutrients in the livestock waste .

(Source: Added at 34 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 34 Ill. Reg. _____, effective _____)

Section 501.236 Chemicals and Other Contaminants

Antibiotics, pesticides, hazardous and toxic chemicals, petroleum products and by-products, other chemical products and by-products, and the residues and containers thereof.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.237 Commences Operation

When an animal feeding operation first contains animals or raw materials such as feed or other materials of an animal feeding operation.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.238 Concentrated Animal Feeding Operation (CAFO)

An AFO that is defined as a Large CAFO pursuant to Section 502.103 or as a Medium CAFO pursuant to Section 502.104, or that is designated as a CAFO pursuant to Section 502.106.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.239 Dry lot

Means a facility for growing ducks in confinement with a dry litter floor cover and no access to

swimming areas.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.251 Field Application

Application of livestock waste onto or incorporated or injected into the soil.

(Source: Added at 34 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 34 Ill. Reg. _____, effective _____)

Section 501.253 Grassed waterway

Means 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 34 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 or greater than atmospheric pressure.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.261 Incorporation

Means 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 34 Ill. Reg. _____, effective _____)

Section 501.263 Injection

Means 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 and where the applied material is retained by the soil.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.267 Land Application Area

Land under the control of an Animal Feeding 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 34 Ill. Reg. _____, effective _____)

Section 501.295 Livestock Waste

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

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 501.305 Man-made

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

(Source: Amended at 34 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 34 Ill. Reg. _____, effective _____)

Section 501.312 Manure

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

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.313 Manure Storage Area

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, composting piles, manure storage tanks and settling basins.

(Source: Added at 34 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;~~

~~c) 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 34 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 the effective date of the new source standard of Subpart G and H of this Part.

(Source: Added at 34 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 no livestock waste or stormwater can be contained by the structure.

(Source: Added at 34 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 34 Ill. Reg. _____, effective _____)

Section 501.357 Process Wastewater

Water directly or indirectly used in the operation of the AFO 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 AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. It also includes any water which may come in contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs or bedding.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.358 Production Area

The part of an AFO 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 area used in the storage, handling, treatment, or disposal of mortalities.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.359 Raw Materials Storage Area

Raw materials storage area includes, but is not limited to, feed silos, silage bunkers, and bedding materials stacks.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.360 Saturated~~Settling Basin~~

Means soils where pore spaces are occupied by water and such that additional inputs of water or liquid wastes cannot infiltrate into the soil. ~~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 34 Ill. Reg. _____, effective _____)

Section 501.363 Setbacks

Means 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 title intake structures, sinkholes, and agriculture well heads.

(Source: Added at 34 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 waters of the State.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.378 Waste Containment Area

Waste containment area includes, but is not limited to, settling basins, and areas within berms and diversions which separate uncontaminated storm water from livestock waste.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.385 Wet lot

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

(Source: Added at 34 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 the National Weather Service in Technical Paper Number 40, Rainfall Frequency Atlas of the United States, May 1961, at http://www.erh.noaa.gov/er/hq/hyd/graphics/24hour25.gif or http://hdsc.nws.noaa.gov/hdsc/pfds/orb/il_pfds.html ,or equivalent regional or state rainfall probability information developed therefrom.

(Source: Added at 34 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 the National Weather Service in Technical Paper Number 40, Rainfall Frequency Atlas of the United States, May 1961, at http://www.erh.noaa.gov/er/hq/hyd/graphics/24hour25.gif or http://hdsc.nws.noaa.gov/hdsc/pfds/orb/il_pfds.html , or equivalent regional or state rainfall probability information developed therefrom. (40 CFR 412.46 (a))

(Source: Added at 34 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 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 Part 502.

c) The~~These~~ regulations in this subpart 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.

(Source: Amended at 34 Ill. _____, 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) 1) Upon July 15, 1991, new or expanded livestock management facilities and new or expanded livestock waste-handling facilities shall not be located within 1/2 mile of a populated area or within 1/4 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 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 which meets any of the following conditions:

1) The facility is located in an Agricultural Area, designated as such pursuant to the Agricultural Areas Conservation and Protection Act, 505 ILCS 5/1 ~~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 1/4 mile of the facility or of a populated area within 1/2 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 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 which locates within 1/4 mile of a neighboring farm residence shall locate at the maximum feasible location from such residence.

f) A new livestock management facility or new livestock waste-handling facility which locates within 1/4 mile of a non-farm residence or within 1/2 mile of a populated area, pursuant to subsection (d), shall locate at the maximum feasible location from 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 which will prevent pollution.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 501.404 Handling and Storage of Livestock Waste

a) 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 Illinois Environmental Protection Act, 35 Ill. Adm. Code Subtitle C: Water Pollution. ~~Any livestock waste stored in excess of six months shall be contained in a manure storage structure.~~

b) Temporary Storage ~~Manure Stacks~~

1) Temporary manure stacks 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 when needed to prevent runoff and leachate from entering surface waters and groundwater.

2) Temporary manure stacks shall be located greater than 75 feet from water wells.

3) Temporary manure stacks shall not be located within 200 feet of potable water supply wells except in accordance with the following condition. Temporary manure stacks may be located greater than 75 feet from a private water supply well, when the owner of the well and the residence supplied by the well are the same as the owner of the temporary manure stack, the owner lives in the residence, the residence is a single family dwelling, and the well only supplies the residence.

4) Temporary manure stacks shall not be located within 400 feet of community water supply wells that derive water from an unconfined shallow fractured or highly permeable bedrock formation or from an unconsolidated and unconfined sand and gravel formation. ~~2) No temporary manure stack shall be constructed within 100 feet of a water well.~~

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) 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 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 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 designated under Section 502.106 and not meeting the definition of Large CAFO or Medium CAFO in Sections 502.103 and 502.104, 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.

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 [415 ILCS 5/12 (2010)] ~~(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 [415 ILCS 5/12 (2010)]~~(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 which threatens to cause a discharge to waters of the State, in violation of Section 12 of the Act [415 ILCS 5/12 (2010)]~~(Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1012)~~.

(Source: Amended at 34 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~~ 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.

b) Operators of livestock waste handling facilities shall practice odor control methods 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 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 "Control of Manure Odors", as incorporated by reference at Section 501.200.

(Source: Amended at 34 Ill. Reg._____, effective _____)

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

PART 502
PERMITS

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SUBPART G: OTHER LIVESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS

SUBPART H: NEW SOURCE PERFORMANCE STANDARDS FOR NEW, LARGE SWINE, POULTRY AND VEAL CAFOS

AUTHORITY: Implementing Sections 9, 12, 13, 21, and 22 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1009, 1012, 1013, 1021 and 1022) and authorized by Section 27 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1981, ch. 111 ½ par. 1027)~~.

SOURCE: Filed and effective January 1, 1978; amended 2 Ill. Reg. 44, p. 137, effective October 30, 1978; codified at 7 Ill. Reg. 10592; amended at 34 Ill. Reg. _____, effective _____.

SUBPART A: PERMITS REQUIRED

Section 502.101 NPDES Permit Requirement and Duty to Maintain Permit Coverage

a) 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.

b) No person specified in subsection (a) of this Section ~~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~~ an ~~NPDES~~ application for modification of the permit. The application for the modification of the permit must comply with the requirements of Subpart B of this Part.

c) The owner or operator of a CAFO that discharges or proposes to discharge 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.

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 or propose to discharge after the expiration date of the NPDES permit.

e) The owner or operator of a new CAFO that will discharge or proposes to discharge must apply for NPDES permit coverage at least 180 days prior to the time that the CAFO commences operation.

f) Land application area requirements for Unpermitted Large CAFOs are found in Section 502.107 of this Part.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 502.102 Concentrated Animal Feeding Operations Defined as a Point Source~~Twenty-five Year Storm Event~~

a) CAFOs ~~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~~are point sources, subject to NPDES permitting requirements of this Part.

b) Once an animal feeding operation is defined as a CAFO for at least one type of animal, the NPDES permit requirements for CAFOs apply with respect to all animals in confinement at the operation and all livestock waste generated by those animals or the production of those animals.~~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 34 Ill. Reg. _____, effective _____)

Section 502.103 ~~Very~~ Large CAFOs~~Operators~~

An AFO is defined as a Large CAFO if as many as or ~~NPDES permit is required if~~ more than the numbers of animals specified in any of the following categories are stabled or confined:

Number of Animals	Kind of Animals
700	Mature dairy cows, whether milked or dry
1,000	Veal calves
1,000	Cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs
2,500	Swine each weighing 55 pounds or more
10,000	Swine each weighing less than 55 pounds
500	Horses
10,000	Sheep or lambs
55,000	Turkeys
30,000	Laying hens or broilers, if the AFO uses a liquid manure handling

	system
125,000	Chickens (other than laying hens), if the AFO uses other than a liquid manure handling system
82,000	Laying hens, if the AFO uses other than a liquid manure handling system
30,000	Ducks (if the AFO uses other than a liquid manure handling system)
5,000	Ducks (if the AFO uses a liquid manure handling system)

~~Number of Animals~~	~~Kind of Animals~~
~~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 34 Ill. Reg._____, effective _____)

Section 502.104 Medium CAFOs~~Large Operators~~

a) An AFO is defined as a 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 either subsection ~~condition~~ (b), ~~or~~ (c) or (d) below of this Section is met:

Number of Animals	Kind of Animals
200 to 699	Mature dairy cows, whether milked or dry
300 to 999	Veal calves
300 to 999	Cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs
750 to 2,499	Swine each weighing 55 pounds or more
3,000 to 9,999	Swine each weighing less than 55 pounds
150 to 499	Horses
3,000 to 9,999	Sheep or lambs
16,500 to 54,999	Turkeys
9,000 to 29,999	Laying hens or broilers, if the AFO uses a liquid

	manure handling system
37,500 to 124,999	Chickens (other than laying hens), if the AFO uses other than a liquid manure handling system
25,000 to 81,999	Laying hens, if the AFO uses other than a liquid manure handling system
10,000 to 29,999	Ducks (if the AFO uses other than a liquid manure handling system)
1,500 to 4,999	Ducks (if the AFO uses a liquid manure handling system)

~~Number of Animals~~	~~Kind of Animals~~
~~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 State through a man-made ditch, flushing system or other similar man-made device; ~~or~~

c) Pollutants are discharged directly into ~~navigable~~ waters of the State 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 is designated as a CAFO by the Agency pursuant to Section 502.106.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 502.105 Small CAFOs~~Voluntary Applications~~

An AFO is defined as a Small CAFO if it is designated as a CAFO by the Agency pursuant to Section 502.106 of this Part 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 34 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 feeding operation not falling within Sections 502.103, 502.104 or 502.105 to obtain a NPDES permit by designating the AFO as a CAFO upon determining that it is a significant contributor of pollutants to waters of the State. In making ~~such designation~~ the determination of whether the AFO is a significant contributor the Agency shall consider the following factors:

1) The size of the animal feeding operation and the amount of livestock wastes reaching ~~navigable~~ waters of the State;

2) The location of the animal feeding operation relative to ~~navigable~~ waters of the State;

3) The means of conveyance of livestock wastes into ~~navigable~~ waters of the State;

4) The slope, vegetation, rainfall and other factors relative to the likelihood or frequency of discharge of livestock waste into ~~navigable~~ waters of the State; 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 ~~paragraph~~ subsection (a) of this Section for any animal feeding operation with less than the number of animals ~~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 State through a man-made ditch, flushing system or other similar man-made device; or

2) Pollutants are discharged directly into ~~navigable~~ waters of the State 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 animal feeding operation designated pursuant to this 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) Upon receipt of the Agency's notification that an NPDES permit is required pursuant to ~~paragraph (b)~~ this Section, 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.

~~e) 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.~~

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 502.107 Land Application Discharges

a) The discharge of livestock waste to waters of the State 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 where 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) For purposes of this Part, where the 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, as specified in Section 502.510(b), 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 35 Ill. Adm. Code 502.510(b)(15) either on site or at a nearby office, or otherwise make such documentation readily available to the Agency upon request.

d) The nutrient management practices to be implemented shall be reviewed annually by the livestock facility owner or operator and the nutrient management plan updated when there is a change in the nutrient management plan.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART B: PERMIT APPLICATIONS

Section 502.201 Permit Applications~~Contents~~

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~~2~~) 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~~3~~) 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 (tons/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~~4~~) A topographic map of the geographic area in which the CAFO is located showing the specific location of the production area, and indicating the following:~~A sketch of the existing and/or proposed facility indicating the following~~:

~~A) Approximate overall dimensions of the facility;~~

A~~B~~) Direction and location of surface drainage and other discharges from the facility;

B~~C~~) ~~General l~~Location of waterways in the area; and

C~~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 (tons/gallons);

9) The total number of acres of land application area;

10) Estimated amount of livestock waste transferred to other persons per year (tons/gallons);

11) A nutrient management plan that is consistent with the requirements of Subpart E;

12) A stormwater pollution prevention plan; and

13)~~5)~~ 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~~requlations~~.

c) Applicable requirements of 35 Ill. Adm. Code 309: Subpart A shall apply to applications for NPDES permits required by this chapter. The Agency may prescribe the form in which information required under this section shall be submitted.

(Source: Amended at 34 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 34 Ill. Reg. _____, effective _____)

Section 502.204 Renewal

Permittees 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 such 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 chapter. The continued permit coverage or renewal of the existing permit is not required if the permittee demonstrates to the Agency, by providing adequate documentation, that the facility will not discharge and does not propose to discharge livestock waste.

(Source: Amended at 34 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 34 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 chapter in the same manner as such 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 of this Subpart.

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 34 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 clarify, modify, or supplement previously submitted material, the Agency may request such information from the owner or operator.

c) The 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.

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 U.S. EPA 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.

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 34 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.

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 of this Part.

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 of this Part.

(Source: Added at 34 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)(15);

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 under Section 502.610(d);

e) Records documenting any actions taken to correct deficiencies required under 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 date(s) livestock waste is applied to each land application area;

l) Weather conditions, including but not limited to precipitation, air temperature, wind speed, wind direction and dew point, at time of land application and for 24 hours prior to and following application;

m) Results from manure, litter and process wastewater 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(s) 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, 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 removed when a livestock waste handling facility (e.g., holding pond, lagoon, or storage pit) is dewatered;

w) The permittee will record 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 (e.g., 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 (e.g., surface, surface with incorporation, 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.

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 this permit and for 5 years after expiration of the permit.

y) If the livestock waste storage facility cannot be dewatered because livestock waste

cannot be field applied in compliance with the conditions of the permit under Parts 501 and 502, the permittee shall immediately notify the appropriate Illinois EPA Regional Field Office and keep records of such notifications.

z Records documenting the test methods and sampling protocols for manure, litter and process wastewater and soil analyses.

(Source: Added at 34 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, 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 (tons/gallons);

4) Total number of acres for land application area by the nutrient management plan;

5) Total number of acres land application area under control of the CAFO that were used for land application of livestock waste in the previous 12 months;

6) A statement indicating whether the current version of the CAFO's nutrient management plan for field 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; and

9) The actual crops planted and actual yields for each field, the actual nitrogen and phosphorus content of the livestock waste, the results of calculations conducted in accordance with Sections 502.515(d)(3) and (e)(3), and the amount of livestock waste applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with Section 502.515(e), the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with Section 502.515(e)(3), and the amount of any supplemental fertilizer applied during the previous 12 months.

(Source: Added at 34 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 State in compliance with the nutrient management plan.

a) The requirements in this Subpart apply to animal feeding operations required to obtain an NPDES permit.

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 34 Ill. Reg. _____, effective _____)

Section 502.505 Nutrient Management Plan Items

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) Type of waste storage for the CAFO;

e) Species, general size, maximum number of animals, and maximum number of animal units at the CAFO;

f) Scaled aerial photos or maps depicting fields 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, and areas restricted from application by this Subpart E;

g) For land application area fields not owned or rented, copies of waste application agreements between the owner or operator of the livestock facilities and the owner of the land where livestock waste will be applied;

h) 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;

i) Realistic crop yield goal for each crop in each field;

j) An estimate of the nutrient value of the livestock waste or results of livestock waste analysis;

k) Livestock waste application methods;

l) Results of the Bray P1 or Mehlich 3 test for soil phosphorus reported in pounds of elemental phosphorus per acre and if the livestock waste is to be applied based on a single year or multi-year phosphorus application on the application field:

    1) An estimate of the volume of livestock waste to be disposed of annually;

    2) The phosphorus content of the livestock waste;

    3) Total amount of phosphorus required in the single year or multi-year rotation by each crop in each field based on realistic crop yield goal;

    4) The phosphorus fertilizer maintenance amount (determined in accordance with the Illinois Agronomy Handbook); and

    5) The maximum livestock waste application rate based on phosphorus for each application field;

m) 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 application field;

8) Livestock waste application rate based on nitrogen for each application field; and

9) Land area required for application;

n) A listing of fields and the planned livestock waste application amounts for each field;

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.510 Nutrient Management Plan Contents

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 Parts 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;

3) Adequate storage of livestock waste, including procedures to ensure proper operation and maintenance of the storage facilities;

4) Proper management of mortalities (*i.e.*, dead animals) to ensure that they are not disposed of in a liquid livestock waste or storm water 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 and livestock waste handling areas;

6) Prevention of direct contact of confined animals with waters of the State;

7) That chemicals and other contaminants handled on-site are not disposed of in any livestock waste or storm water storage or treatment system unless specifically designed to treat such 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 State;

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 setbacks from residences and waters or within the areas prohibited from land application in Section 502.645 of this Part;

12) A winter time land application plan that meets the requirements of Section 502.630(c) of this Part;

13) The plan for the inspection, monitoring, management and repair of subsurface drainage systems at the livestock waste application site;

14) A spill prevention and control plan;

15) Specific records that will be maintained to document the implementation and management of the minimum elements described in subsections (2) through (14) of this Section; and

16) 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 34 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. The permit 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 Subparts F, G, and H, must include:

1) the fields available for land application;

2) field-specific rates of application properly developed pursuant to subsections (d) or (e) of this Section, 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) of this Section or the Narrative Rate Approach as described in subsection (e) of this Section, 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 such 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 from sources specified by the Agency 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;

I) 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 the date of land application required by Section 502.635; or

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 such 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) of this Section;

D) the realistic yield goal for each crop or use identified for each field; and

E) the nitrogen and phosphorus recommendations from sources according to Section 502.625(e)(5) 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) Where 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 from sources according to Section 502.625(e)(5) 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) of this Section.

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.

G) Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

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) of this Section 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) of this Section, 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 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 34 Ill. Reg. _____, effective _____)

Section 502.520 Changes to the Nutrient Management Plan

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

a) The CAFO owner or operator must provide the changes to previously permitted nutrient management plan, except that the results of calculations made in accordance with the requirements of Sections 502.515(d)(3) and 502.515(e)(3) of this Part are not subject to the requirements of this Section. 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 such changes are substantial changes as described in subsection (d) of this Section.

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 35 Ill. Adm. Code 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 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, such addition of new land would be a change to the new CAFO owner 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 of this Part; and

4) Changes to site-specific components of the CAFO's nutrient management plan, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the U.S.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART F: LIVESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS FOR CAFOs

Section 502.600 Applicability

This Subpart applies to discharges resulting from CAFOs. This Subpart applies to livestock waste discharge limitations and technical standards for permitted CAFOS. This Subpart does not apply to CAFOs that stable or confine Horses or Sheep, subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.720, and CAFOs that confine Ducks in either a Dry Lot or Wet Lot, subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.730.

(Source: Added at 34 Ill. Reg._____, effective _____)

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

a) Except as provided in subsections (a)(1) and (a)(2) of this Section, there must be no discharge of livestock wastes from livestock management facilities or livestock waste handling facilities into waters of the State from the production area. Whenever precipitation causes an overflow of livestock wastes, such wastes in the overflow may be discharged into waters of the State 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 for new large swine, poultry or veal CAFOs. For purposes of this subsection the confinement area consists of the animal feeding operation; and

2) The production area is operated in accordance with the additional measures and records required by Section 502.610.

b) Except as provide in 40 CFR 125.30 through 125.32, any existing point source subject to this Subpart must achieve the livestock waste discharge limitations and technical standards 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 Section 502.605 (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 such 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 where 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 the 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, BOD_5 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.

   E) Predicted annual average discharge of pollutants, expressed appropriate as a mass discharge on a daily basis (lbs/day), and calculated considering subsections (c)(3)(A) through (D) of this Section.

4) The Agency has the discretion to request additional information to supplement the supporting technical analysis, including inspection of the CAFO.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.610 Additional Measures for 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 State.

c) Visual inspections. There must be routine visual inspections of the CAFO production area. At a minimum, the following must be visually inspected:

1) Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water 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;

3) Weekly inspections of the livestock waste storage facilities; the inspection will note the level in liquid livestock waste storage facility using the depth marker required in subsection (d) of this Section.

d) Depth marker. All open surface liquid livestock waste storage facilities must have a depth marker which 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 of this Part, all open surface livestock waste storage structures associated with such sources must include a depth marker which 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) of this Section, deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.

g) Discharge to waters of the State of pollutants from dead livestock or dead animal

disposal facilities are prohibited. Dead livestock and water contaminated by dead livestock shall not be disposed in the liquid livestock waste handling facilities, 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 into a livestock management facility, livestock waste handling facility, egg washing facility, egg processing facility, or in areas at such facilities where products, by-products or raw materials are set aside for disposal or raw materials are stored.

i) Livestock facilities utilizing an earthen lagoon or other earthen waste storage structure, the owner or operator 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 other liquid livestock waste storage structures by agitation, mechanically or by other means to maintain proper operation of the storage structures. Soils that are contaminated with livestock waste removed from earthen livestock waste handling facilities areas 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) Each CAFO subject to this Subpart must implement the record keeping requirements for the production area found in Sections 502.320(c) through (h).

(Source: Added at 34 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 the risk to surface waters associated with livestock waste application:

1) Soil type,

2) Slope,

3) Conservation practices,

4) Tile inlet locations,

5) Distance to surface waters,

6) Proximity to wells,

7) Location of direct conduits to surface water including preferential flow paths; and

8) Soil erodibility or potential for soil erosion.

b) Connectivity to waters of the State.

1) If the field assessment in Section 502.615(a) indicates no connectivity to waters of the state, then compliance with Section 502.615(c) is required.

2) If connectivity to waters of the State is demonstrated under Section 502.615(a), that includes an assessment of surface waters 200 feet from the field edge unless the surface waters are upstream or there is adequate diking to prevent runoff, the following requirements must be met.

A) The Nutrient Management Plan must provide a minimum 200 foot setback from waters of the State unless the water is upgrade or there is adequate diking to prevent runoff, however:

i) Livestock waste shall not be applied within the 10-year floodplain, as identified in the Federal Emergency Management Assistant maps, unless injection or incorporation is used within 24 hours of application, and

ii) Livestock waste shall not be applied within 200 feet of a potable water supply well.

B) If the provisions above are complied with and if connectivity to waters of the State is controlled by application of the livestock waste by injection or by incorporation within 24 hours, or equivalent conservation practices are installed and maintained according to the Natural Resources Conservation Service of the United States Department of Agriculture standards then one must comply with Section 502.615(c).

C) If the above provisions cannot be achieved or maintained, then Phosphorus-based application must be conducted in accordance with Sections 502.645 and 502.615(f).

c) Soil erosion

1) If soil loss is less than the tolerable limit (T), one must comply with Section 502.615(d).

2) If soil loss is greater than the tolerable limit (T), the application rate must be in accordance with a Phosphorus-based application in accordance with Section 502.615(f).

d) Direct conduits to surface water

1) Direct conduits to surface waters include but are not limited to tile inlets, grass waterways and drainage ditches including those 150 feet from the field edge, assessed in Section 502.615(a), unless the direct conduit is up gradient or there is adequate diking to prevent runoff. There shall be no land application of livestock waste to direct conduits. If direct conduits to surface waters are absent, one must comply with Section 502.615(e).

2) If direct conduits are present, one must comply with Section 502.615(e) and the following setback provisions:

A) When direct conduits are less than 400 feet from surface waters:

i) Application shall be conducted no closer than 150 feet from a tile inlet or the edge of a ditch that has no vegetative buffer or the top of the ditch bank that has no vegetative buffer, or

ii) Application shall be conducted no closer than 50 feet from a tile inlet or the edge of a ditch that has a vegetative buffer or 50 feet from the center of a grass waterway, or

iii) Application shall be conducted no closer than 15 feet from direct conduits when application is conducted via injection or with incorporation within 24 hours.

B) When direct conduits are greater than 400 feet from surface waters:

i) Application shall be conducted no closer than 100 from a tile inlet or the edge of a ditch that has no vegetative buffer; or

ii) Application shall be conducted no closer than 35 feet from a title inlet or the edge of the a ditch that has a vegetative buffer or 35 feet from the center of a grass waterway, or

iii) Application is conducted via injection or with incorporation within 24 hours.

3) Livestock waste must not be applied to grassed waterways. If Nitrogen-based application cannot be conducted in accordance with this Section, then Phosphorus-based application must be conducted in accordance Sections 502.615(e), 502.615(f), and 502.645.

e) Soil test

1) When the median Bray P1 or Mehlich 3 soil level of Phosphorus is greater than 300 pound per acre, application must be conducted on a Phosphorus-limited basis in accordance with Section 502.615(f).

2) If the median Bray P1 or Mehlich 3 soil level of Phosphorus is equal to or less than 300 pound per acre, then Nitrogen based application may be conducted in accordance Section 502.615(g).

f) Phosphorus based rates of operation

1) When Phosphorus based application rates must be used, then Phosphorus application must be neutral in the Nutrient Management Plan period.

2) If the soil concentration, as determined by the soil tests conducted under Section 502.635 or Section 502.615(e) is greater than 300 pounds of Phosphorus per acre, the maximum amount of Phosphorus applied must not exceed the maintenance Phosphorus level for the next year's crop growth and harvested.

3) Nitrogen based application rates may be used, but the soil Phosphorus cannot increase above the initial soil Phosphorus or above the agronomic optimum, whichever is greater, during the Nutrient Management Plan period.

4) Livestock waste must not be applied to grassed waterways.

g) Nitrogen based rates of operation

1) Livestock waste must not be applied to grassed waterways.

2) If Nitrogen based application cannot be conducted in accordance with this Section, then Phosphorus based application must be conducted as set for in Sections 502.615(e) and 502.615(f).

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.620 Methods of Application

a) Determination of soil loss must be determined for each field, and account for changes in factors affecting runoff, soil erodibility, slope length, slope steepness, cover management and supporting practices.

b) A determination of the field specific soil loss must be made using RUSLE2 and compared to the tolerable soil loss for the soils in that field.

c) Surface application may be used when the land slope is no greater than 5% or when the yearly average soil loss is equal to or less than 5 tons per acre regardless of slope, as determined by the Revised Universal Soil Loss Equation 2, at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm. Injection or surface application with incorporation within 24 hours shall be used when the land slope is greater than 5% and the yearly average soil loss is greater than 5 tons per acre.

(Source: Added at 34 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 such application is specified in a nutrient management plan. Any such application must be consistent with plan requirements. The agronomic rate must be determined in a manner consistent with the consistent with this Section.

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. The following sources may be used to obtain the amount of waste generated: Midwest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, Table 2-1, or 35 Ill. Adm. Code 560, Table 1. For purposes of this section, "maximum design capacity" means the maximum number of livestock that can be housed at any time for a minimum of 45 days in a livestock management facility.

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 MidWest Plan Service's MWPS-18, Livestock Waste Facilities Handbook (Table 2-1, 10-6, or 10-7), or Midwest Plan Service's MWPS-18, Section 1, Manure Characteristics or the Agency's Agriculture Related Pollution regulations (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 MidWest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, 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 Midwest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, Table 10-2; and

2) The first-year mineralization of organic nitrogen into a plant available form, as obtained from Midwest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, Table 10-5.

e) Realistic Crop Yield. The realistic crop yield goal shall be determined for each field where the livestock waste is to be applied. The realistic crop yield goal shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The following listing of sources of data shall be utilized to determine the realistic crop yield goal.

1) Proven yields. The proven yield shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The owner or operator shall indicate the method used to

determine the proven yield. Data from years with crop disasters may be discarded. Proven yields shall be used unless there is a sound agronomic basis for predicting a different realistic crop yield goal;

2) Crop insurance yields. A copy of the crop insurance yields shall be included in the plan; or

3) Farm Service Agency - United States Department of Agriculture yields. A copy of the assigned crop yields shall be included in the plan.

4) Soils based yield data from the Natural Resources Conservation Service of the United States Department of Agriculture shall be used if the owner or operator cannot obtain a realistic crop yield goal pursuant to subsections (e)(1) through (e)(3) of this Section. A soil map of the application areas shall be included in the plan. The realistic crop yield goal shall be determined by a weighted average of the soil interpretation yield estimates for the areas that will receive livestock waste.

f) Nitrogen Credits

1) Nitrogen credits shall be calculated by the CAFO owner or operator, pursuant to Section 502.505(m)(7) of this Part, 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, expressed as P_2O_5, derived from MidWest Plan Service's MWPS-18, Livestock Waste Facilities Handbook (Table 2-1, 10-6, or 10-7), 35 Ill. Adm. Code 560 (Table 1 or Table 2), or the results of analysis performed on samples of waste;

2) The realistic crop yield goal of each crop in the field, obtained pursuant to subsection (e)(1) of this Section;

3) The phosphorus maintenance fertilizer amount for the planned crop rotation, expressed as P_2O_5 for the targeted crop yield goal of each planned

crop, obtained from the Illinois Agronomy Handbook;

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 shall be consistent with N-based or P-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, or 35 Ill. Adm. Code 560, Appendix A.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.630 Protocols to Land Apply Livestock Waste

a) Livestock wastes shall not be discharged to waters of the State. Livestock waste application shall not cause runoff to waters of the State 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) Livestock waste shall not be applied during precipitation when runoff of livestock waste will be produced and that conservative waste loading rates will be used in the case of a high water table or shallow earth cover to fractured bedrock.

c) Winter Application Prohibition

1) Land application of livestock waste to frozen, ice covered or snow covered land 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;

B) Liquid livestock waste has been injected to the extent that soil conditions allow;

C) The storage volume available on December 1 of each year is less than 120 days of storage; and

D) 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 (c)(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 soil 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 new swine, poultry and veal facilities. The determination of normal precipitation and storm event precipitation shall be based on National Weather Service or State Water Survey Records.

C) The following sources may be used to determine normal precipitation:

i) http://www.isws.illinois.edu/atmos/statecli/Summary/Illinois.htm, or

ii) http://cdo.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl

D) The owner or operator shall keep a record of the precipitation value used and the source from which the value was obtained.

E) A reasonable safety factor to prevent overtopping of the structure and to allow for wet weather and wet field conditions extending beyond April 1 must also be addressed in this calculation.

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

d) Winter Application Plan

In order to conduct land application on frozen, ice covered, or snow covered land, the following conditions must be met:

1) No surface land application may occur within ¼ mile of a non-farm

residence;

2) No discharge may occur during land application of livestock waste;

3) Land application on frozen land 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 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 0.25 inches or more of precipitation in a 24 hour period as measured in liquid form by the National Weather Service at http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/ for the location nearest to the land application area; or

   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 by the National Weather Service at http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm for the location nearest to the land application area.

4) 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 by the National Weather Service at http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/ for the location nearest to the land application area; or

   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 2 by the National Weather Service at http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm for the location nearest to the land application area;

5) If the land application of livestock waste is on ice covered or snow covered land, the 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 at one of the following sources for the location nearest to the land application area, and the owner or operator shall maintain a record of the forecast from the source used:

A) http://www.nws.noaa.gov/mdl/forecast/graphics/MEX/index.html or

B) http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm;

6) If the 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 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 of 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 of 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.

e) Availability of Individual Fields for Winter Application

If livestock waste is to be surface applied on frozen land, 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 grassy, crop stubble or residue, or woody vegetative buffer zone 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 intercepts all runoff from the livestock waste application area; and

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 less than the tolerable limit (T) as determined using RUSLE2, and have a median Bray P1 or Mechlich 3 soil level of Phosphorus equal to or less than 300 pounds per acre;

5) Surface Application may only occur after application of three times the otherwise applicable setbacks from 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 ¼ mile setback 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 after application of two times the otherwise applicable setbacks from Sections 502.615 and 502.645. This setback requirement does not include the ¼ mile setback from residences contained in Section 502.645(a).

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.635 Manure and Soil Sampling

a) Soil Phosphorus Sampling. Soil samples shall be obtained and analyzed from each of the livestock waste application fields 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) Sampling and analysis for phosphorus shall be, in accordance with the sampling protocols in the Illinois Agronomy Handbook for Bray P1 or Mehlich 3, and the analytical procedures for Bray P1 or Mehlich 3,

2) Soil samples shall be at the same time in the cropping cycle and rotation so that results are comparable year to year.

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 livestock waste samples shall be used for calculation of the application rate allowed by the NPDES permit.

2) The laboratory analysis of livestock waste sample shall include, but not be limited to, total kjeldahl nitrogen, 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.

(Source: Added at 34 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 34 Ill. Reg. _____, effective _____)

Section 502.645 Land Application Setback Requirements

a) Setbacks from Residences

Livestock waste shall not be land applied within 1/4 mile of any residence not part of the CAFO, unless it is injected or incorporated on the day of application. However, livestock management facilities and livestock waste handling facilities that have irrigation systems in operation prior to May 21, 1996, or existing facilities applying waste on frozen ground, are not subject to the provisions of this subsection;

b) Setbacks from Waters

Livestock waste shall not be land applied:

1) within 200 feet of surface water, unless the water is upgrade or there is adequate diking;

2) within 100 feet of down gradient open subsurface drainage intakes, agricultural drainage wells, sinkholes, waterways or other conduits to surface waters, unless a 35 foot vegetative buffer exists between the land application area and the waterways, open subsurface drainage intakes, agricultural drainage wells, sinkholes or other conduits to surface water ;

3) Section 502.645(b)(2) setback requirements do not apply if the following setback requirements from conduits to surface waters are maintained:

A) when conduits are less than 400 feet from surface water, the application shall be conducted no closer than 15 feet from the conduit to surface water and is conducted via injection or with incorporation within 24 hours; and

B) when conduits are greater than 400 feet from surface water, the application shall be conducted via injection or incorporation within 24 hours.

4) in the case of a high water table or shallow earth cover to fractured bedrock without demonstration of a conservative loading rate; and

5) on porous soils, so as to cause nitrate or bacteria contamination of ground waters.

c) Livestock waste shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used; and

d) Livestock waste shall not be land applied to waters of the State, grassed waterways or other conduits to waters of the State.

e) Livestock waste shall not be land applied within 200 feet of potable water supply wells.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.650 Recordkeeping Requirements for Land Applications Areas

Each CAFO subject to this Subpart must implement the record keeping requirements for the land application area found in Sections 502.320 (j) through (r) and 502.320(z).

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.655 Other Limitations

The nutrient management plan shall limit application rates, timing of application with respect to soil conditions, and method of application so as to prevent the discharge of livestock waste via subsurface drainage systems. If such a discharge through a subsurface drainage system occurs the plan shall be revised so as to prevent future discharges.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART G: OTHER LIFESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS

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 point source as of the effective date of these regulations must achieve the livestock waste discharge limitations representing the application of NSPS as of the date of permit coverage.

b) The livestock waste discharge limitations representing New Source Performance Standards 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 502.655.

d) CAFOs subject to this Section shall attain the limitations and requirements in Subpart F as of the date of permit coverage.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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 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 40 C.F.R. 125.30 through 125.32, and subject to the provisions in subsection (a)(2) of this Section, any existing point source subject to this Section shall have no discharge of process wastewater pollutants to waters of the U.S. Achievement of no process wastewater discharge to waters of the U.S. 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 U.S. 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 as provided in 40 C.F.R. 125.30 through 125.32 and when the provisions of subsection (b)(2) of this Section apply, any existing point source subject to this Section shall have no discharge of process wastewater pollutants to waters of the U.S. Achievement of no process wastewater discharge to waters of the U.S. 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 U.S.

c) New Source Performance Standards (NSPS) for Horse and Sheep CAFOs
Except as provided in subsection (b)(2) of this Section, any new source subject this Section shall have no discharge of process wastewater pollutants to waters of the U.S. Achievement of no process wastewater discharge to waters of the U.S. is the performance standard representing New Source Performance Standards for Horse and Sheep CAFOs.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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 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

Except has provided in 40 C.F.R. 125.30 through 125.32, any existing point source subject to this Section shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the applicable of BPT:

1) BOD_5 is limited to a maximum daily limit of 3.66 pounds/1,000 ducks or 1.66 kilograms/1,000 ducks.

2) BOD_5 is limited to a maximum monthly average of 2.0 pounds/1,000 ducks or 0.91 kilograms/1,000 ducks.

3) Fecal coliform is not to exceed 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) of this Section, any new source subject to this Section shall have no discharge of process wastewater pollutants to waters of the U.S. Achievement of no process wastewater discharge to waters of the U.S. 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 U.S.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART H: NEW SOURCE PERFORMANCE STANDARDS FOR NEW, LARGE SWINE, POULTRY AND VEAL 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 applicable livestock waste discharge limitations and technical standards in Subpart F of this Part.

c) These limitations and requirements must be attained as of the date of NPDES permit coverage.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.810 Production Area Requirements

There must be no discharge of livestock waste to waters of the U.S. from the production area unless the CAFO complies with the alternative livestock waste discharge limitations provided in Section 502.830 of this Part.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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 502.655.

(Source: Added at 34 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 Director establish New Source Performance Standard permit best management practice 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 best management practice 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 Director establishes such livestock waste discharge limitations, "no discharge of livestock waste pollutants," as used in this section, means that the storage structure is designed, operated, and maintained in accordance with best management practices established by the Director 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 34 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) of this Section and operated in accordance with the additional measures and records required by Section 502.610.

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 land found in Section 502.630 of this Part;

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 by the most recent version of the National Resource Conservation Service's Animal Waste Management (AWM) software. CAFOs may use equivalent design software or procedures as approved by the Agency.

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 listed in subsection (a) of this Section. 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 using the most recent version of the Soil Plant Air Water (SPAW) Hydrology Tool.

1) The evaluation must include all inputs to SPAW 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 internal analysis conducted over a period of 100 years.

3) The Agency may approve equivalent evaluation and simulation procedures.

g) The Agency may waive the requirement in subsection (f) of this Section 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 34 Ill. Reg. _____, effective _____)

From: Gluckman.Matthew@epamail.epa.gov [mailto:Gluckman.Matthew@epamail.epa.gov]
Sent: Friday, January 14, 2011 04:38 PM
To: Yurdin, Bruce
Cc: Jann.Stephen@epamail.epa.gov <Jann.Stephen@epamail.epa.gov>
Subject: Illinois livestock rule revisions

Bruce- Attached are our comments on the draft rules provided by Illinois EPA on Dec. 1. Let's plan on scheduling a meeting or call to discuss once you've had a chance to review the comments. Thanks,

Matt Gluckman
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(See attached file: IEPA 120110 draft regs EPA 011411 comm.docx)

ATTACHMENT 6b
USEPA Comments on
December 2010 Version

EPA Comments on Illinois EPA's December 1, 2010 draft revisions to Title 35 Illinois Administrative Code, Subtitle E, Chapter I, Parts 501 and 502

General comment: Several provisions in existing Parts 501 and 502 are not being revised, and were not included in the December 1 draft. Please confirm that the existing definitions are being retained in these cases. We have included comments on the existing provisions where appropriate.

Part 501

Subpart B: Definitions and Incorporations

501.222 Agricultural stormwater discharge. Consistent with 40 CFR 122.23(e) and 73 *Federal Register* 70435-70436, November 20, 2008, which includes a definition of agricultural stormwater for CAFOs subject to NPDES permit requirements, this provision needs to be revised to cite the state nutrient management practices that must be met for precipitation-related discharges to be considered agricultural stormwater.

501.241 CWA. Revisions to this provision have not been proposed. However, the definition only references up to the 1977 amendments to the Federal Water Pollution Control Act, and should be revised to reflect later amendments to the Act.

501.252 Frozen ground. The definition refers to soil that is frozen between the first ½ to 8 inches of soil, as measured from the ground surface. EPA's Manure Management Guidance (p. O-12) states that frozen ground is any portion of the 0-6 inch soil layer (root zone) that is frozen. The draft definition should be revised consistent with the definition in EPA's guidance, as exclusion of the first ½ inch of soil from the assessment could result in application on ground that is frozen on the surface, creating a high risk of runoff. Application in such conditions could also result in incomplete injection of manure, litter or process wastewater, again creating a high risk of runoff.

501.267 Land application area. Consistent with EPA guidance, we recommend including in this definition situations where the CAFO does not own, rent or lease the land to be used for land application, but where a farmer releases control over the land application area, and the CAFO determines when, where, and how much manure is applied to those lands (See, NPDES Permit Writers Guidance for CAFOs, December 2003, p. 4-3).

501.312 Manure. Draft regulations use the term "litter" in the context of manure, litter and process wastewater. The regulations should be revised to include a definition of litter.

501.333 New source. This provision defines new sources in terms of the effective date of the State regulations. The definition needs to be revised consistent with federal requirements for new sources. As discussed in the preamble to the 2003 CAFO rule, for purposes of applying the new source performance standards in that rule, a source would be a new source if it commences construction after April 14, 2003 (*see* 40 CFR 122.2). 68 Federal Register 7200 (February 12, 2003). This revision will be particularly important in the case of new Large swine, poultry and veal CAFOs, which are subject to more stringent production area effluent limitations than existing sources. 501.355 Pollutant. Revisions to this provision have not been proposed. However, the definition does not include "filter backwash", and should be revised consistent with the definition in 40 CFR 122.2.

501.363 Setbacks. Typo in line 3: change "title" to "tile".

Subpart C: Operational Rules for all Livestock Management Facilities and Livestock Waste-Handling Facilities

501.390 and 501.395 25-year, 24-hour precipitation event; 100-year, 24-hour precipitation event. These definitions refer to the May 1961 National Weather Service Technical Paper Number 40, Rainfall Frequency of the United States. The references in these definitions need to be revised to reflect more recent references representing current precipitation patterns, such as: National Oceanic and Atmospheric Administration. 2004. *Updated Ohio River Basin and Surrounding States Precipitation Frequency Estimates*. NOAA Atlas 14, volume 2. Available for Illinois at: http://hdsc.nws.noaa.gov/hdsc/pfds/orb/il_pfds.html.

501.404(c)(3)(A) and (B) Liquid livestock waste storage capacity requirements. Subsection A requires existing livestock waste management facilities which handle liquid waste to have adequate storage capacity so as not to cause air or water pollution as defined in the Act or applicable regulations. Subsection B requires new facilities to provide a minimum of 120 days of 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. These provisions need to be revised to establish adequate, clearly defined storage period requirements for both existing and new Large CAFOs in terms of days of storage capacity. One approach would be to reference the requirements in the LMFA regulations, which establish storage periods for lagoons (270 days), non-lagoon liquid or semi-solid storage systems (150 days) and solid storage structures (180 days), and which appear to apply to both existing and new operations. Alternatively, based on EPA's assessment of Illinois climate data, it appears that storage periods of at least 180 days in the northern half of the State, and of at least 150 days in the southern half are needed to prevent the need for land application at inappropriate times, such as when ground is saturated, frozen or covered with ice or snow. EPA's assessment of costs for the CAFO Effluent Limitations Guidelines, 40 CFR Part 412, were based on 180 days of storage, and such storage was thus considered to be achievable for CAFOs within the scope of the federal regulations (*see,* Cost Methodology Report for Beef and Dairy Animal Feeding Operations (January 2001), p. 4-21.

501.405(a) Field application of livestock waste- Requirements for facilities not required to obtain NPDES permits. Consistent with our comment on 501.222, this provision should be revised as follows: "... facilities that are not Large CAFOs, the quantity ..." Furthermore, Illinois needs to revise the rule to provide that the technology-based standards for land application of manure, litter, and process wastewater by permitted Medium and Small CAFOs will be established on the basis of best professional judgment. *See* 40 CFR 122.44(a)(1) and 125.3.

Part 502

Subpart A: Permits Required

502.105 Small CAFOs. Recommend deleting "defined as," to avoid the implication that small livestock facilities may be defined as CAFOs, rather than designated.

502.106 Case-by-case designation requiring NPDES permits.

(c) Recommend clarifying that onsite inspections could be by either EPA or Illinois EPA.

(d) The second sentence of this provision allows Illinois EPA to issue an NPDES permit with a compliance schedule of up to 14 months for a designated CAFO to comply with the Illinois Environmental Protection Act and applicable regulations. This sentence authorizes extension of deadlines for compliance with federal requirements, and needs to be deleted from the rule.

502.107 Land application discharges. Subsection (b) references 502.510(b) (NMP contents) which both permitted and unpermitted CAFOs must meet for precipitation-related discharge to be agricultural stormwater. For permitted Large CAFOs, the provision should be revised to reference 502.510 generally, consistent with the requirement that permitted Large CAFOs implement nutrient management plans (NMP) consistent with the technical standards for CAFOs in Part 502 Subpart F. For unpermitted Large CAFOs, the provision should be revised to reference the land application provisions of 502, Subpart F.

502.201 Permit applications.

(a)(5) This provision requires applicants to provide a statement as to projected changes in the size of the livestock operation and when they may occur during the term of the permit. Recommend revising the provision to clarify whether the referenced change in size pertains to the maximum or average number of animals, or both.

(a)(7) Topographic map of the area in which the CAFO is located showing the location of the production area, and indicating the following:

> (B) Location of waterways in the area. Recommend clarifying if this includes grassed waterways.

(C) Location of area for manure disposal. This provision is unclear, as manure is treated, stored or contained, but is not generally disposed of in the production area.

502.204 Renewal. Provision requires applicants for reissuance to use "proper forms." Recommend clarifying whether Illinois EPA requires use of its forms to satisfy this requirement.

This provision also waives the requirement to reapply if the permittee provides "proper documentation" that the facility will not discharge and does not propose to discharge livestock waste. To provide clear expectations to CAFOs and establish objective review criteria, this provision should reference the provisions or criteria that a CAFO would need to meet for documentation to be proper. See, technical evaluation criteria to satisfy the no discharge certification option, 40 CFR 122.23(i)(2).

502.301 Permit issuance and conditions- standards for issuance.

(a) Under this provision, Illinois EPA shall not grant NPDES permit coverage unless the applicant submits proof that the facility will be constructed, modified or operated so as to not cause a violation of the Illinois Environmental Protection Act, applicable Board regulations or the CWA, or has been granted a variance under Title IX of the Act… Illinois EPA does not propose to revise this provision. Federal regulations do not include an equivalent provision. The closest is 40 CFR 122.4(a) and (d) ("No permit may be issued: (a) when *the conditions of the permit* do not provide for compliance … (d) when *the imposition of conditions* cannot ensure compliance …" emphasis added). We are concerned that this provision may function as a barrier to effective implementation of a permit program for CAFOs that discharge or propose to discharge. We recommend that Illinois strike the provision or revise it to mirror 40 CFR 122.4(a) and (d) Separately, we seek confirmation that Title IX of the Illinois Environmental Protection Act would not allow for variances from effluent limits or requirements specified under the CWA or NPDES regulations.

502.310(b) CAFOs seeking coverage under NPDES general permits. This provision says that the Agency "may request" additonal information when necessary to the complete the notice of intent or clarify, modify, or supplement previously submitted material. To ensure its ability to receive complete permit applications consistent with 40 CFR 122.21(e), this provision should be revised to allow the Agency to **require** additional information.

(c) Consistent with 40 CFR 122.23(h), this provision should be revised to add "and the draft terms of the nutrient management plan to be incorporated into the permit."

Permit modifications. The draft regulations do not include revisions to the permit modification requirements. We recommend adding provisions consistent with 40 CFR 122.62(a)(17) and 122.63(h), to prevent having to handle incorporation of the terms of each CAFO's NMP into a general permit, and each change to the terms of a CAFOs NMP (in particular nonsubstantial changes), as permit modifications subject to public notice requirements.

502.315 CAFO permit requirements. As written, this provision may be misleading as to all elements that must be included in NPDES permits for CAFOs. It should be revised to include or reference other necessary permit elements, including effluent limitations and standards (with reference to Subparts F-H), monitoring and reporting requirements beyond annual reporting, and standard conditions.

502.320 Recordkeeping requirements

502.325 Annual report.

(b)(1) This provision needs to be revised to include "ducks" in the list of types of animals to be reported.

(4) Recommend revising this provision to "total number of acres **utilized** for land application ~~area~~ **consistent with** the nutrient management plan."

(5) Strike "land application area" in line 1.

(6) Provision asks whether the current NMP was developed or approved by a certified nutrient management planner. We recommend revising this provision to clarify that a certified nutrient management planner is a person certified in accordance with LMFA requirements.

502.505 Nutrient management plan items. Recommend adding a requirement for the NMP to indicate whether it was developed by a certified nutrient management planner, and if so, the name of the planner.

(f) Recommend revising first line to require "scaled aerial photos or maps depicting **each** field available for livestock waste applications..."

(j) This provision requires NMPs to include an estimate of the nutrient value of the livestock waste or results of livestock waste analysis. We recommend revising this provision to require the applicant to specify the method used to derive an estimate, as well as any references used.
(l)(4) This provision requires applicants to provide the phosphorus fertilizer maintenance amounts for fields to be used for application, determined in accordance with the Illinois Agronomy Handbook. Other provisions in Part 502 also reference the Handbook. Based on our review, it appears that the Illinois Agronomy Handbook is a publication that must be purchased in order to review it. To ensure that facilities can comply with permit application requirements, and that the public can provide meaningful review of NMPs, we strongly recommend that this reference be made available without its having to be purchased from an outside source.

502.510 Nutrient management plan contents.

(b)(11) We recommend revising this provision to clarify that livestock waste shall not be applied within the setbacks from residences and waters **of the State**...

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. The permit terms include:

(d)(2)(A) The outcome of the field-specific assessment of the potential for nitrogen and phosphorus transport from each field. As discussed in more detail below, it is not clear from Section 502.615(a) what an objective outcome of an assessment conducted pursuant to that provision would be.

502.520(a) Recommend adding "these" to the beginning of the second sentence.

Subpart F: Livestock Waste Discharge Limitations and Technical Standards for CAFOs.

502.600 Applicability. This provision states that the Subpart applies to discharges resulting from CAFOs. It also states that it applies to livestock waste discharge limitations and technical standards for permitted CAFOs. The provision should be revised to clarify the scope of the Subpart, in particular whether it applies to all CAFOs, or only to permitted CAFOs.

502.605 Livestock Waste Discharge Limitations and Technical Standards for the Production Area for Permitted CAFOs. Recommend striking "for the Production Area," in the Subpart heading, as the technical standards in Subpart F includes standards for nutrient management applicable to land application areas.

(a) While 502.600 indicates that this subpart applies to permitted CAFOs, this provision establishes discharge limitations for "livestock management facilities and livestock waste handling facilities," some of which would not meet the CAFO definition. This provision should be revised to clarify whether it applies to permitted CAFOs, or to all livestock management and waste handling facilities as defined under LMFA regulations.

Based on the language of 502.605 and Subpart F, it appears 502.605 is intended to apply to new, as well as existing Medium and Small CAFOs. Section 502.605(b), however, only specifies that existing point sources subject to that Subpart must achieve discharge limitations and technical standards as of the date of permit coverage. If it is Illinois EPA's intent for new Medium and Small CAFOs to be covered by this provision, the provision should be revised to specify when such new operations must achieve the applicable limitations and standards.

(a)(1) This provision establishes discharge limitations for livestock management and handling facilities (see earlier comment) except for new large swine, poultry or veal CAFOs. As written, the provision leaves the impression that new large swine, poultry and veal CAFOs are not subject to discharge limitations. This provision should be revised to reference Subpart H, which establishes the requirements for new swine, poultry and veal CAFOs.

Lastly, while this provision establishes discharge limitations for CAFOs consistent with the effluent limitations in 40 CFR Part 412 (with the exceptions discussed above), we recommend

that the provision be revised to clarify that in addition to the other specified conditions, discharge is only authorized where it is from an overflow of manure, litter or process wastewater from a containment or storage structure.

(c)(3) Add "where" at the end of line 1, to complete the sentence.

502.610(j). This provision specifies that CAFOs shall perform periodic removal of livestock waste solids from other liquid livestock waste storage structures by agitation, mechanically or by other means to maintain proper operation of the storage structures. This requirement is unclear, as agitation is not a means of removing waste solids. Reference to "other" liquid livestock waste storage structures is also unclear.

502.615 Nutrient Transport Potential. General concern with this provision: there appear to be scenarios under which a permitted CAFO would not be required to conduct quantitative field-specific risk assessments using arecognized methods. Soil test phosphorus requirements are included in 502.615(e), but it is not clear when this assessment method, rather than the qualitative method in (a) would be required. As a result, it does not appear that Illinois EPA's technical standard with respect to application rates would ensure minimization of the risk of nutrient transport.

(a) Field assessment. The draft provision allows for a field assessment based on identification of listed factors to determine the risk to surface waters associated with livestock waste application. The assessment method appears to be qualitative, and not based on a recognized method. As such, the outcome of such assessments would be at the sole discretion of the CAFO, and would not provide an objective risk rating upon which nutrient application decisions would be based (see comments below regarding 502.615(e), (f) and (g)). This provision needs to be revised as necessary to be consistent with 40 CFR 412.4(c)(2).

(b) Connectivity to waters of the state. This provision goes beyond establishment of a setback requirement, and implies there is no connectivity between a field used for land application of livestock waste and surface waters if there is more than 200 feet between the edge of the field and a surface water body. This presumption appears to be arbitrary, and would likely hinder enforcement in the event there was an improper discharge as a result of land application to surface waters more than 200 feet from the edge of field. The provision may also allow setbacks that are inconsistent with 40 CFR 412.4(c)(4). This provision should be deleted or revised as necessary to enable Illinois EPA to regulate discharges of pollutants to waters of the United States consistent with the Clean Water Act and NPDES requirements.

(d) Direct conduits to surface water. This provision is similarly problematic, in that it appears to only recognize features generally considered to be direct conduits to surface water (i.e. tile inlets, grass waterways and drainage ditches) as direct conduits if they are within 150 feet of the field edge. While the provision prohibits land application of livestock waste to direct conduits, it appears that discharges resulting from improper application which reach conduits to surface

water, but where there is more than 150 feet between the field edge and the conduit, would not be considered a discharge to a conduit to surface water. This provision should be deleted or revised as necessary to enable Illinois EPA to regulate discharges of pollutants to waters of the United States consistent with the Clean Water Act and NPDES requirements. Any revision should include references to sinkholes and agricultural well heads, consistent with 412.4(c)(5).

(d)(1) and (2) are confusing as drafted. Section (d)(1) requires compliance with Section 502.615(e) (soil test requirement) where direct conduits to surface water are absent. Subsection (d)(2) requires compliance with 502.615(e) if conduits to surface water are present. This section should be restructured to clarify when soil tests are required under 502.615(e).

(d)(2)(A)(ii) and (iii) Setback requirements when direct conduits are less than 400 feet from surface waters, and (B)(iii) Setback requirements when direct conduits are greater than 400 feet from surface waters. These provisions allow setbacks that are inconsistent with 40 CFR 412.4(c)(4). Illinois EPA has not demonstrated that the practices contemplated in these reduced setback requirements are equivalent to the 100 foot general setback requirement or equivalent 35 foot vegetated buffer equivalent. Further, the proximity of a direct conduit to surface water to a surface water body does not appear to be relevant, and does not provide a basis for establishing a setback requirement less protective than federal requirements.

(d)(3) This provision states that livestock waste must not be applied to grassed waterways. It further states that if N-based application cannot be conducted in accordance with this section, then P-based application must be conducted in accordance with cited provisions. There are two concerns with this provision. First, the relationship between the prohibition of application to grassed waterways to N or P-based application rates is unclear. Second, the phrasing of the provision appears to allow application at a rate above the N-based rate, and that if such a rate is necessary, application shall be at the P-based rate. This provision should be revised to clarify that application shall always be prohibited or limited in accordance with the outcome of the nutrient transport risk assessment..

502.615(e) Soil tests. Recommend referencing 502.635, to indicate when soil tests must be conducted. In addition, for the reason discussed above, we did not have access to the Illinois Agronomy Handbook. Illinois EPA should verify that referenced soil sampling protocols specify a minimum number of samples per acre, so that appropriate median sample results can be determined, as well as protocols for locating sampling points, and determining the type of samples to be taken.

(e), (f) and (g) Soil test, P and N based rates of operation. These draft technical standards regarding application rates do not ensure that the risk of nutrient transport will be minimized, and therefore are not consistent with 40 CFR 412.4(c)(2). In particular, the standards are not consistent with the expectation that N-based rates be allowed where there is a low to medium

risk of transport, that an annual P rate shall not be exceeded where the risk of transport is high, and that application be prohibited where the risk is very high. These provision need to be revised as necessary to be consistent with 40 CFR 412.4(c)(2). See 68 *Federal Register* 7209-7211, February 12, 2003.

(f)(3) This provision states that nitrogen based application rates may be used, but the soil Phosphorus cannot increase above the initial soil Phosphorus or above the agronomic optimum, whichever is greater, during the Nutrient Management Plan period. The term "agronomic optimum" should be defined.

502.625(a) Determination of livestock waste application rates. Among other requirements, this provision states that multi-year P application is allowed when such application is specified in a nutrient management plan. It goes on to say that the rate must be determined consistent with this section, but appears to allow multi-year P application where the risk of runoff is high, if a CAFO includes such a rate in its NMP. This provision needs to be revised to be consistent with 40 CFR 412.4(c)(2)(ii). In addition, the second "the consistent with" in the last sentence of this provision should be deleted.

(g) Phosphorus. Consistent with 40 CFR 122.42(e)(1)(vii) and 412.4(c)(3), this provision should be revised to require the phosphorus content of livestock waste from existing CAFOs to be determined through testing, and that estimates based on technical references are only authorized for new CAFOs.

(3) This provision requires NMPs to include the phosphorus maintenance fertilizer amount for the planned crop rotation. As such, the provision may allow overapplication of P where there is a high or very high risk of runoff (see comments above regarding 502.615(e), (f) and (g).

502.630 Protocols to land apply livestock waste.

(b) This provision prohibits application during precipitation when runoff will be produced and that conservative waste loading rates will be used in the case of a high water table or shallow earth cover to fractured bedrock. In order to establish means for determining circumstances when application is likely to result in runoff, this provision should be revised to establish hydraulic loading limits based on an assessment of antecedant moisture conditions. *See,* for example, Ohio Natural Resources Conservation Service. 2003. Available Water Capacity (AWC) Practical Soil Moisture Interpretations for Various Soils Textures and Conditions to Determine Liquid Waste Volume Applications not to exceed AWC. Conservation Practice Standard 633, table 1. Further, Illinois should revise the provision so that hydraulic loading limits apply under all circumstances, not just during precipitation or in the case of high water table or shallow bedrock. The limitations should distinguish between unfrozen and frozen soil. According to Mitchell, et al., (1997), frozen soil can infiltrate only one-tenth the water that can infiltrate into unfrozen soil. In addition, objective criteria and/or definitions should be provided for the terms "high water table" and "shallow earth cover" to establish restrictions or conditions so as to minimize the risk of discharge from such pathways.

In addition, the draft technical standard related to timing of application does not restrict application prior to forecasted rain, except when soil is frozen or covered with snow. The rule needs to prohibit surface application any time there is more than a defined probability of precipitation within 24 hours in an amount that is likely to produce runoff *See* 40 CFR 412.4(c)(2) and section 4.1.2.4 of the *NPDES Permit Writers' Guidance Manual and Example NPDES Permit for CAFOs*. See Table 10.1 in the *National Engineering Handbook, Part 630, Hydrology* (USDA, NRCS 1993), for the minimum quantity of precipitation required to produce runoff for a given (unfrozen) soil-cover complex.

(c) Winter application.

(1)(A) and (B) prohibit land application of livestock waste to frozen, ice covered or snow covered land, unless no practical alternative measures are available to handle the livestock waste within storage facilities or to dispose the livestock waste at other sites, or unless liquid waste has been injected to the extent soil conditions allow. Region 5 appreciates Illinois' attempt at prohibitingsurface application on snow, ice or frozen soil. However, the prohibition appears to be largely diminished by these qualifiers. To clarify the scope of this prohibition, the term "practical alternative measures" needs to be discussed in more detail. Given that soil conditions generally do not allow for injection under these conditions, the provision needs to be be revised to minimize circumstances under which surface application on frozen, ice-covered or snow-covered land is authorized.

(C) This provision prohibits winter application unless the storage volume on December 1 of each year is less than 120 days. However, it does not require a CAFO to have any volume by design and it does not require the CAFO to have properly operated and maintained its waste storage so as to maximize actual available volume, and thereby to prevent the need for winter application. This provision therefore appears to allow winter application in situations when it could have been avoided,. We encourage Illinois EPA to follow the approach taken by states such as Michigan, Ohio and Wisconsin. CAFO permits issued in these states require CAFOs to evaluate during a specified time frame in the fall whether they have actually adequate storage capacity so as to prevent the need for winter application, to take steps to maximize available capacity over the winter, and to notify the State if available capacity is inadequate.

(D) Similar to (C), this provision allows winter application where the discharge of livestock wastes from the structure to surface waters is expected to occur due to shortage in storage capacity, but does not appear to require a CAFO to have properly operated and maintained its storage structures so as to prevent the need for winter application.

(d) Winter application plan.

(3) This provision states that land application on frozen land shall not occur within 24 hours preceding a forecast of 0.25 inches of precipitation in a 24 hour period as measured in liquid form. As there is virtually no infiltration of precipitation into frozen soil, this provision should

be revised consistent with (d)(4) regarding application on ice or snow covered land, to specify that application shall not occur if more than a trace amount of precipitation (0.1 inch) is forecast.

(7) If runoff occurs as a result of winter land application, this provision requires reporting, but not sampling. We recommend including a discharge sampling requirement where a CAFO becomes aware of a discharge from frozen, ice covered or snow covered land where land application has been conducted. Sampling results will aid response efforts, and provide necessary information for subsequent compliance and enforcement action. We also recommend revising these provisions to address how observed runoff would inform the appropriate conditions or restrictions for future applications when similar conditions exist.

(e) Based on a preliminary assessment using the Winter Spreading Technical Guidance in Appendix L of EPA's Managing Manure at Concentrated Animal Feeding Operations Guidance (August 2004), it appears that management practices in this paragraph will not minimize the risk of nutrient transport when manure, litter, or process wastewater is surface applied on ice covered land or snow covered land and therefore the paragraph does not meet 40 CFR 412.4(c)(2). We will provide additional detail on this issue upon completion of our analysis.

(1) This provision should be revised to define or provide reference to a definition of "vegetative fence rows."

(2) This provision includes woody vegetation among the types of buffer zones which must be present where winter application is to be conducted. It also establishes the condition that the vegetative buffer zone between the land application area and the surface waters or conduit to surface water intercept all runoff from the livestock waste application area. Unlike the other types of buffer zones included in this provision (grassy, crop stubble or residue), however, woody vegetation does not serve a pollutant filtering role. Reference to woody vegetative buffer zones should therefore be deleted from this provision. Moreover, vegetative buffers would not be expected to intercept all runoff from application of livestock waste on frozen, ice or snow covered land. According to *Urban Hydrology for Small Watersheds* (USDA NRCS 1986) sheet flow – a type of flow amenable to treatment in a buffer zone – usually becomes shallow concentrated flow after a maximum of 300 feet. Runoff generated upslope within a land application area is likely to concentrate or form a channel before it enters a buffer, diminishing or eliminating the effectiveness of a buffer as a pollution control practice. This hydraulic phenomenon further highlights the need to prohibit or severely minimize the application of livestock waste on frozen, ice or snow covered land.

502.635(a) Soil sampling. Soil phosphorus sampling is required twice in a permit term. This provision should be revised to clarify that sampling must be at least 1-2 years apart, to ensure representativeness of sample results throughout the permit term.

(b)(2) Manure Sampling. This provision states that the laboratory analysis of livestock waste samples shall include, but not be limited to, total kjeldahl nitrogen, ammonium nitrogen, total

phosphorus, total potassium, and percent total solids. Consistent with 40 CFR 412.4(c)(3), which requires manure to be analyzed for nitrogen and phosphorous content, this provision should be revised to require sampling for all nitrogen species and/or total nitrogen. "Ammonium" should also be revised to "ammonia". If IEPA wants to list the species individually, ammonia-nitrogen would be more appropriate. The EPA method for ammonia-nitrogen will give the result of the total ammonium + ammonia (dominant species dependent on pH) in the solution.

502.645 Land application setback requirements.

(b) Setbacks from waters.

(3) This provision establishes exceptions to the setback requirements from conduits to surface waters where conduits are greater or less than 400 feet from surface water, and application is by injection or incorporation within 24 hours. As discussed above, the proximity of a direct conduit to surface water to a surface water body does not appear to be relevant factor for consideration, and does not provide a basis for establishing a setback requirement less protective than federal requirements. It should also be noted that the federal setback requirements do not distinguish between surface application and injection or incorporation. Moreover, these draft alternative setback requirements have not been demonstrated to be equivalent to or better than the setback requirements in 40 CFR 412.4(c)(5) or 412.4(c)(5)(i) for all permitted CAFOs, and are thus not consistent with the federal requirements.

(4) This provision states that livestock waste shall not be applied in the case of a high water table or shallow earth cover to fractured bedrock without demonstration of a conservative loading rate. Application under such conditions could lead to discharges to surface waters where there is a direct hydrological connection between groundwater and surface water. As discussed in regard to section 502.630(b), objective criteria and/or definitions should be provided for the terms "conservative loading rate", "high water table", and "shallow earth cover" to minimize the risk of discharge from such pathways.

(5) This provision states that livestock waste shall not be applied on porous soils, so as to cause nitrate or bacteria contamination of ground waters. "Porous soils" should be defined.

502.655 Other limits. This provision requires the NMP to limit application rates and the timing and method of application to prevent discharge to subsurface drainage systems. The provision states that if such discharges occur, the plan shall be revised to prevent future discharges. This provision should be revised to clarify that non-precipitation related discharges, including from subsurface drainage systems, are prohibited, and subject to enforcement by Illinois EPA or U.S. EPA.

Subpart G: Other Livestock Waste Discharge Limitations and Technical Standards. Recommend striking "and Technical Standards" from this Subpart heading, as this Subpart only includes discharge limitations, and not technical standards for nutrient management.

502.720 Horse and Sheep CAFOs: BPT, BAT and NSPS, and 502.730 Duck CAFOs: BPT and NSPS. To be consistent with the discharge limitations for other animal sectors (see, e.g. 502.710(d)), and to emphasize the requirements to comply with these limitations, these sections should be revised to require CAFOs subject to those sections to attain applicable limitations and requirements as of the date of permit coverage.

Subpart H: New Source Performance Standards for New Large Swine Poultry and Veal CAFOs.

502.800 Applicability.

(b) This provision states that the requirements in this Subpart are in addition to the applicable livestock waste discharge limits and technical standards in Subpart F. Subpart F establishes basic BAT production area requirements, but also allows CAFOs to seek approval for alternative effluent limitations under the voluntary alternative performance standards (VAPS) provisions. VAPS are not available for new swine, poultry or veal CAFOs under 40 CFR Part 412. This provision should be revised as necessary to ensure that VAPS are not available for new swine, poultry and veal CAFOs.

502.840 Technical evaluation. The second sentence in the introductory paragraph needs to be edited to make it a complete sentence.

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

PART 501
GENERAL PROVISIONS

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

SUBPART D: REGISTRATION REQUIREMENTS

AUTHORITY: Implementing and authorized by Sections 9, 12, 13, 21, 22 and 27 of the Environmental Protection Act [415 ILCS 5/9, 5/12, 5/13, 5/21, 5/22 and 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. 10592; amended in R90-7 at 15 Ill. Reg. 10075, effective July 1, 1991; amended at 34 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.

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 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.

Part 502 of this Chapter 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. This Part also contains requirements applicable to land application activities from AFOs which are defined as Large CAFOs and are not permitted under an NPDES permit.

Part 503 of this Chapter contains the requirements applicable to fish and aquatic animal production facilities, irrigation activities, and silvicultural activities and sources.

The Part 506 rules implement the Livestock Management Facilities Act [510 ILCS 77]. These rules and the Livestock Management Facilities Act are administered by the Illinois Department of Agriculture.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART B: DEFINITIONS AND INCORPORATIONS

Section 501.200 Incorporations by Reference

a) The Board incorporates the following material by reference:

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

"Control of Manure Odors," ASAE EP379.1 (December 1986).

"Design of Anaerobic Lagoons for Animal Waste Management," ASAE EP403.1 (March 1990).

"Illinois Agronomy Handbook, 24th Edition". University of Illinois, College of Agriculture, Consumer and Environmental Sciences. Urbana, IL, July 2009.

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

"Manure Characteristics". Section 1. Second Edition MWPS-18. 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). North Central Region-University of Missouri Soil Testing Lab, 23 Mumford Hall, University of Missouri Columbia, MO 65211.

National Weather Service in NOAA Atlas 14-Precipitation Frequency Atlas of the United States Volume 2 Version 3.0 (2004) found at

http://hdsc.nws.noaa.gov/hdsc/pfds/orb/il_pfds.html.

b) This Section incorporates no later editions or amendments.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

~~SUBPART B: DEFINITIONS~~

Section 501.201 Definitions

a) Except as hereinafter stated 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 Parts 501, 502 and 503.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 501.222 Agricultural Stormwater Discharge

A precipitation-related discharge of livestock waste from the land application area of an AFO where the livestock waste has been land applied in accordance with site-specific nutrient management practices that ensure appropriate agricultural utilization of nutrients in the livestock waste .

(Source: Added at 34 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 34 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 thereof.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.237 Commences Operation

When an animal feeding operation first contains animals or raw materials such as feed or other materials of an animal feeding operation.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.238 Concentrated Animal Feeding Operation (CAFO)

An AFO that is defined as a Large CAFO pursuant to Section 502.103 or as a Medium CAFO pursuant to Section 502.104, or that is designated as a CAFO pursuant to Section 502.106.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.241 CWA

Means the Clean Water Act, as amended, 33 U.S.C. 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 34 Ill. Reg. _____, effective _____)

Section 501.242 Dry lot

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

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.244 Erosion Factor T

Means an estimate of the maximum average annual rate of soil erosion by water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year. The erosion factor T is provided in United States Department of Agriculture Natural Resources Conservation Service soil surveys.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.251 Field Application

Application of livestock waste onto or incorporated or injected into the soil.

(Source: Added at 34 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 34 Ill. Reg. _____, effective _____)

Section 501.253 Grassed waterway

Means 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 34 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 or greater than atmospheric pressure.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.261 Incorporation

Means 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 34 Ill. Reg. _____, effective _____)

Section 501.263 Injection

Means 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 and where the applied material is retained by the soil.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.267 Land Application Area

Land under the control of an Animal Feeding 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 34 Ill. Reg. _____, effective _____)

Section 501.295 Livestock Waste

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

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 501.305 Man-made

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

(Source: Amended at 34 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 34 Ill. Reg. _____, effective _____)

Section 501.312 Manure

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

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.313 Manure Storage Area

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, composting piles, manure storage tanks and settling basins.

(Source: Added at 34 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;~~

~~c) 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 34 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 the effective date of the new source standard of Subpart G and H of this Part.

(Source: Added at 34 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 no livestock waste or stormwater can be contained by the structure.

(Source: Added at 34 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 34 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 34 Ill. Reg. _____, effective _____)

Section 501.357 Process Wastewater

Water directly or indirectly used in the operation of the AFO 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 AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. It also includes any water which may come in contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs or bedding.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.358 Production Area

The part of an AFO 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 area used in the storage, handling, treatment, or disposal of mortalities.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.359 Raw Materials Storage Area

Raw materials storage area includes, but is not limited to, feed silos, silage bunkers, and bedding materials stacks.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.360 Saturated~~Settling Basin~~

Means soils where pore spaces are occupied by liquid ~~water~~ and such that additional inputs of water or liquid wastes cannot infiltrate into the soil. ~~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 34 Ill. Reg. _____, effective _____)

Section 501.363 Setbacks

Means 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 34 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 waters of the State.

(Source: Added at 34 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 thereby reducing the risk of pollutants leaving the field.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.379 Waste Containment Area

Waste containment area includes, but is not limited to, settling basins, and areas within berms and diversions which separate uncontaminated storm water from livestock waste.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 501.385 Wet lot

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

(Source: Added at 34 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 the National Weather Service in NOAA Atlas 14-Precipitation Frequency Atlas of the United States, Volume 2, Version 3.0 (2004) found at http://hdsc.nws.noaa.gov/hdsc/pfds/orb/il_pfds.html.

(Source: Added at 34 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 the National Weather Service in NOAA Atlas 14-Precipitation Frequency Atlas of the United States, Volume 2, Version 3.0 (2004) found at http://hdsc.nws.noaa.gov/hdsc/pfds/orb/il_pfds.html.

(Source: Added at 34 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 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 Part 502.

c) The~~These~~ regulations in this subpart 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.

(Source: Amended at 34 Ill. _____, 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) 1) Upon July 15, 1991, new or expanded livestock management facilities and new or expanded livestock waste-handling facilities shall not be located within 1/2 mile of a populated area or within 1/4 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 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 which meets any of the following conditions:

1) The facility is located in an Agricultural Area, designated as such pursuant to the Agricultural Areas Conservation and Protection Act, 505 ILCS 5/1 ~~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 1/4 mile of the facility or of a populated area within 1/2 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 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 which locates within 1/4 mile of a neighboring farm residence shall locate at the maximum feasible location from such residence.

f) A new livestock management facility or new livestock waste-handling facility which locates within 1/4 mile of a non-farm residence or within 1/2 mile of a populated area, pursuant to subsection (d), shall locate at the maximum feasible location from 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 which will prevent pollution.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 501.404 Handling and Storage of Livestock Waste

a) 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 Illinois Environmental Protection Act, 35 Ill. Adm. Code Subtitle C: Water Pollution. ~~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.

2) A temporary manure stack shall not be located within 75 feet from any water well, except monitoring wells.

3) A ~~T~~temporary manure stacks 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 when needed to prevent runoff and leachate from entering surface waters and groundwater.

~~2) No temporary manure stack shall be constructed within 100 feet of a water well.~~

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) 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 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 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 <u>not designated under Section 502.106 and not meeting the definition of Large CAFO or Medium CAFO in Sections 502.103 and 502.104,</u> 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.

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 [415 ILCS 5/12 (2010)] ~~(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 [415 ILCS 5/12 (2010)]~~(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 which threatens to cause a discharge to waters of the State, in violation of Section 12 of the Act [415 ILCS 5/12 (2010)]~~(Ill. Rev. Stat. 1989, ch. 111 1/2, par. 1012)~~.

(Source: Amended at 34 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~~ 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. Large unpermitted CAFOs must comply with Sections 502.102 and 502.510(b).

b) Operators of livestock waste handling facilities shall practice odor control methods 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 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 "Control of Manure Odors", as incorporated by reference at Section 501.200.

(Source: Amended at 34 Ill. Reg._____, effective _____)

SUBPART D: REGISTRATION REQUIREMENTS

Section 501.505 Large Unpermitted AFO Registration

a) All Animal Feeding Operations with more animals than the numbers of animals provided in 35 Ill. Adm. Code 502.103 must register with the Agency within 90 days after the effective date of this Section.

b) All proposed new AFOs that will have more animals than the numbers of animals provided in 35 Ill. Adm. Code 502.103 must register with the Agency 30 days prior to the commencement of construction of the new AFO.

c) An existing AFO with the same or fewer animals as the numbers of animals provided in 35 Ill. Adm. Code 502.103 that proposes to house additional animals in greater numbers than the numbers provided in 35 Ill. Adm. Code 502.103 must register with the Agency 30 days prior to increasing the number of animals above the registration threshold.

d) Registration must be made on forms and in a format prescribed by the Agency and must contain the following information:

1) the name and address of all owners of the AFO,

2) the facility address,

3) the facility location according to township, county, section, and quarter section;

4) the latitude and longitude of the facility location

5) the types of animal holding areas including pastures, confinement barns, and open lots;

6) the types and size of animals and the maximum number of each type and size;

7) the name and signature of the owner or operator that completed the registration form; and

8) the date the registration form was completed.

e) The Agency will make registration forms available.

f) When an AFO that has registered with the Agency ceases operation, the owner or operator must submit a notification of termination of registration to the Agency within 30 days of closure of the facility.

g) An owner or operator of a CAFO that has obtained coverage under an NPDES permit is not subject to the registration requirement in this Section.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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

PART 502
PERMITS

SUBPART A: PERMITS REQUIRED

SUBPART B: PERMIT APPLICATIONS

SUBPART C: PERMIT ISSUANCE AND CONDITIONS

SUBPART D: APPEAL AND ENFORCEMENT

SUBPART E: REQUIREMENTS FOR DEVELOPING AND IMPLEMENTING NUTRIENT MANAGEMENT PLANS

SUBPART F: LIVESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS FOR PERMITTED CAFOs

SUBPART G: ADDITIONAL LIVESTOCK WASTE DISCHARGE LIMITATIONS

SUBPART H: NEW SOURCE PERFORMANCE STANDARDS FOR NEW, LARGE SWINE, POULTRY AND VEAL CAFOS

Section

502.800	Applicability
502.810	Production Area Requirements
502.820	Land Application Area Requirements
502.830	Alternative Best Management Practice Livestock Waste Discharge Limitations
502.840	Technical Evaluation

APPENDIX A References to Previous Rules

AUTHORITY: Implementing Sections 9, 12, 13, 21, and 22 of the Environmental Protection Act (Ill. Rev. Stat. 1981, ch. 111 1/2, pars. 1009, 1012, 1013, 1021 and 1022) and authorized by Section 27 of the Environmental Protection Act ~~(Ill. Rev. Stat. 1981, ch. 111 ½ par. 1027)~~.

SOURCE: Filed and effective January 1, 1978; amended 2 Ill. Reg. 44, p. 137, effective October 30, 1978; codified at 7 Ill. Reg. 10592; amended at 34 Ill. Reg. _____, effective _____.

SUBPART A: PERMITS REQUIRED

Section 502.101 NPDES Permit Requirement and Duty to Maintain Permit Coverage

a) A CAFO is a point source. Any discharge of pollutants into waters of the State from a CAFO is prohibited unless the owner or operator obtains an NPDES permit or unless the discharge is an agricultural stormwater discharge as defined by Section 501.222. Any CAFO that has an unpermitted discharge is in violation of the Act and these 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 of this Part.

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 feeding operation is defined as a CAFO for at least one type of animal, the NPDES permit requirements for CAFOs apply with respect to all animals in confinement at the 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 34 Ill. Reg. _____, effective _____)

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

a) The discharge of livestock waste to waters of the State 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 where 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 35 Ill. Adm. Code 502.510(b)(15) either on site or at a nearby office, or otherwise make such documentation readily available to the Agency upon request.

d) The nutrient management practices to be implemented shall be reviewed annually

by the livestock facility owner or operator and the nutrient management plan updated when there is a change in the nutrient management plan.

~~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 34 Ill. Reg. _____, effective _____)

Section 502.103 ~~Very~~ Large CAFOs~~Operators~~

An AFO is defined as a Large CAFO if as many as or ~~NPDES permit is required if~~ more than the numbers of animals specified in any of the following categories are stabled or confined:

Number of Animals	Kind of Animals
700	Mature dairy cows, whether milked or dry
1,000	Veal calves
1,000	Cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs
2,500	Swine each weighing 55 pounds or more
10,000	Swine each weighing less than 55 pounds
500	Horses
10,000	Sheep or lambs
55,000	Turkeys
30,000	Laying hens or broilers, if the AFO uses a liquid manure handling system
125,000	Chickens (other than laying hens), if the AFO uses other than a liquid manure handling system
82,000	Laying hens, if the AFO uses other than a liquid manure handling system
30,000	Ducks (if the AFO uses other than a liquid manure handling system)
5,000	Ducks (if the AFO uses a liquid manure handling system)

~~Number of Animals~~	~~Kind of Animals~~
~~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 34 Ill. Reg._____, effective _____)

Section 502.104 Medium CAFOs~~Large Operators~~

a) An AFO is defined as a 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 either subsection ~~condition~~ (b), ~~or~~ (c) or (d) below of this Section is met:

Number of Animals	Kind of Animals
200 to 699	Mature dairy cows, whether milked or dry
300 to 999	Veal calves
300 to 999	Cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls and cow/calf pairs
750 to 2,499	Swine each weighing 55 pounds or more
3,000 to 9,999	Swine each weighing less than 55 pounds
150 to 499	Horses
3,000 to 9,999	Sheep or lambs
16,500 to 54,999	Turkeys
9,000 to 29,999	Laying hens or broilers, if the AFO uses a liquid manure handling system
37,500 to 124,999	Chickens (other than laying hens), if the AFO uses other than a liquid manure handling system
25,000 to 81,999	Laying hens, if the AFO uses other than a liquid manure handling system
10,000 to 29,999	Ducks (if the AFO uses other than a liquid manure handling system)
1,500 to 4,999	Ducks (if the AFO uses a liquid manure handling system)

~~Number of Animals~~	~~Kind of Animals~~
~~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 State through a man-made ditch, flushing system or other similar man-made device; or

c) Pollutants are discharged directly into ~~navigable~~ waters of the State 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 is designated as a CAFO by the Agency pursuant to Section 502.106.

(Source: Amended at 34 Ill. Reg. _____, effective _____)

Section 502.105 Small CAFOs~~Voluntary Applications~~

An AFO is a Small CAFO if it is designated as a CAFO by the Agency pursuant to Section 502.106 of this Part 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 34 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 feeding operation not falling within Sections 502.103, 502.104 or 502.105 to obtain a NPDES permit by designating the AFO as a CAFO upon determining that it is a significant contributor of pollutants to waters of the State. In making ~~such designation~~ the determination of whether the AFO is a significant contributor the Agency shall consider the following factors:

1) The size of the animal feeding operation and the amount of livestock wastes reaching ~~navigable~~ waters of the State;

2) The location of the animal feeding operation relative to ~~navigable~~ waters of

the State;

3) The means of conveyance of livestock wastes into ~~navigable~~ waters of the State;

4) The slope, vegetation, rainfall and other factors relative to the likelihood or frequency of discharge of livestock waste into ~~navigable~~ waters of the State; 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 ~~paragraph~~ subsection (a) of this Section for any animal feeding operation with less than the number of animals ~~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 State through a man-made ditch, flushing system or other similar man-made device; or

2) Pollutants are discharged directly into ~~navigable~~ waters of the State 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 animal feeding operation designated pursuant to this 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) Upon receipt of the Agency's notification that an NPDES permit is required pursuant to ~~paragraph (b)~~ this Section, 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.

~~e) 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.~~

(Source: Amended at 34 Ill. Reg. _____, effective _____)

SUBPART B: PERMIT APPLICATIONS

Section 502.201 Permit Applications~~Contents~~

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 weig hing 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~~2~~) 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~~3~~) 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 (tons/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~~4~~) 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;~~

A~~B~~) Direction and location of surface and subsurface drainage and other discharges from the facility; and

B~~C~~) ~~General l~~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 (tons/gallons);

9) The total number of acres of land application area;

10) Estimated amount of livestock waste transferred to other persons per year (tons/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

14)~~5)~~ 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~~requlations~~.

c) Applicable requirements of 35 Ill. Adm. Code 309: Subpart A shall apply to applications for NPDES permits required by this chapter. The Agency may prescribe the form in which information required under this section shall be submitted.

(Source: Amended at 34 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 34 Ill. Reg. _____, effective _____)

Section 502.204 Renewal

Permittees 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 such 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 chapter.

(Source: Amended at 34 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 34 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 chapter in the same manner as such 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 of this Subpart.

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 34 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 clarify, modify, or supplement previously submitted material, the Agency may request such 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.

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 U.S. EPA 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 34 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 of this Part.

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 of this Part.

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 of this Part.

d) Requirements to comply with the livestock waste discharge limitations in Subparts F and G of this Part and, if applicable, the New Source Performance Standards in Subpart H of this Part.

(Source: Added at 34 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)(15);

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 under Section 502.610(d);

e) Records documenting any actions taken to correct deficiencies required under 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 date(s) 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 manure, litter and process wastewater 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(s) 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, 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 permittee will record 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 (e.g., 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 (e.g., surface, surface with incorporation, 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.

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 this permit and for 5 years after expiration of the permit.

y) If the livestock waste storage facility cannot be dewatered because livestock waste cannot be field applied in compliance with the conditions of the permit under Parts 501 and 502, the permittee shall immediately notify the appropriate Illinois EPA Regional Field Office and keep records of such notifications.

z Records documenting the test methods and sampling protocols for manure, litter and process wastewater and soil analyses.

(Source: Added at 34 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 (tons/gallons);

4) Total number of acres of land application area covered by the nutrient management plan;

5) Total number of acres under the control of the CAFO that were used for land application of livestock waste in the previous 12 months;

6) A statement indicating whether the current version of the CAFO's nutrient management plan for field 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; and

9) The actual crops planted and actual yields for each field, the actual nitrogen and phosphorus content of the livestock waste, the results of calculations conducted in accordance with Sections 502.515(d)(3) and (e)(3), and the amount of livestock waste applied to each field during the previous 12 months; and, for any CAFO that implements a nutrient management plan that addresses rates of application in accordance with Section 502.515(e),

the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months, the data used in calculations conducted in accordance with Section 502.515(e)(3), and the amount of any supplemental fertilizer applied during the previous 12 months.

(Source: Added at 34 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 State in compliance with the nutrient management plan.

a) The requirements in this Subpart apply to animal feeding operations required to obtain an NPDES permit.

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 34 Ill. Reg. _____, effective _____)

Section 502.505 Nutrient Management Plan Items

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, general size, maximum number of animals, and maximum number of animal units 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 BMPs, setbacks and areas restricted from application by this Subpart E;

h) For land application area fields not owned or rented, copies of waste application agreements 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 reported in pounds of elemental phosphorus per acre and if the livestock waste is to be applied based on a single year or multi-year phosphorus application on the application field:

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 P_2O_5 per acre, obtained from the Illinois Agronomy Handbook, incorporated by reference at Section 501.200.

4) The maximum livestock waste application rate based on phosphorus for each application field;

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 application field;

8) Livestock waste application rate based on nitrogen for each application 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 34 Ill. Reg. _____, effective _____)

Section 502.510 Nutrient Management Plan Contents

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 Parts 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;

3) Adequate storage of livestock waste, including procedures to ensure proper operation and maintenance of the storage facilities;

4) Proper management of mortalities (*i.e.*, dead animals) to ensure that they are not disposed of in a liquid livestock waste or storm water 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 State;

7) That chemicals and other contaminants handled on-site are not disposed of in any livestock waste or storm water storage or treatment system unless specifically designed to treat such 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 State;

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 setbacks from residences as 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(c) of this Part;

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 and after land application at a land application site to determine failures of the subsurface drainage systems that may cause discharges;

14) A spill prevention and control plan;

15) Specific records that will be maintained to document the implementation and management of the minimum elements described in subsections (2) through (14) of this Section; and

16) 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 34 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. The permit 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 Subparts F, G, and H, must include:

1) the fields available for land application;

2) field-specific rates of application properly developed pursuant to subsections (d) or (e) of this Section, 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) of this Section or the Narrative Rate Approach as described in subsection (e) of this Section, 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 such 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 from sources specified by the Agency 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;

I) 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 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 such 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) of this Section;

D) the realistic yield goal for each crop or use identified for each field; and

E) the nitrogen and phosphorus recommendations from sources according to Section 502.625(e)(5) 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) Where 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 from sources according to Section 502.625(e)(5) 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) of this Section.

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.

G) Timing of application for each field, insofar as it concerns the calculation of rates of application, is not a term of the nutrient management plan.

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) of this Section 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) of this Section, 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 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 34 Ill. Reg. _____, effective _____)

Section 502.520 Changes to the Nutrient Management Plan

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

a) The CAFO owner or operator must provide changes to a previously permitted nutrient management plan to the Agency, except that the results of calculations made in accordance with the requirements of Sections 502.515(d)(3) and 502.515(e)(3) of this Part are not subject to the requirements of this Section. These 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 such changes are substantial changes as described in subsection (d) of this Section.

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 35 Ill. Adm. Code 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 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, such addition of new

land would be a change to the new CAFO owner 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 of this Part; and

4) Changes to site-specific components of the CAFO's nutrient management plan, where such changes are likely to increase the risk of nitrogen and phosphorus transport to waters of the State.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART F: LIVESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS FOR PERMITTED CAFOs

Section 502.600 Applicability

This Subpart provides livestock waste discharge limitations and technical standards for permitted CAFOS. Point sources must achieve the livestock waste discharge limitations and technical standards in this Subpart as of the date of permit coverage. This Subpart does not apply to CAFOs that stable or confine Horses or Sheep, subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.720, and CAFOs that confine Ducks in either a Dry Lot or Wet Lot, subject to applicable production area livestock waste discharge limitations and technical standards found in Section 502.730.

(Source: Added at 34 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) and (a)(2) of this Section, there must be no discharge of livestock wastes into waters of the State from the CAFO production area. Whenever precipitation causes an overflow of livestock wastes from the containment or storage structure, such wastes in the overflow may be

discharged into waters of the State 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 for new large swine, poultry or veal CAFOs which must comply with Subpart H of this Part, 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 Section 502.605(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 such 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 where 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 the 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, BOD_5 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.

E) Predicted annual average discharge of pollutants, expressed appropriate as a mass discharge on a daily basis (lbs/day), and calculated considering subsections (c)(3)(A) through (D) of this Section.

4) The Agency has the discretion to request additional information to supplement the supporting technical analysis, including inspection of the CAFO.

(Source: Added at 34 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 State.

c) Visual inspections. There must be routine visual inspections of the CAFO production area. At a minimum, the following must be visually inspected:

1) Weekly inspections of all storm water diversion devices, runoff diversion structures, and devices channeling contaminated storm water 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;

3) Weekly inspections of the livestock waste storage facilities; the inspection will note the level in liquid livestock waste storage facility using the depth marker required in subsection (d) of this Section.

d) Depth marker. All open surface liquid livestock waste storage facilities must have a depth marker which 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 of this Part, all open surface livestock waste storage structures associated with such sources must include a depth marker which 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) of this Section, deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.

g) Discharge to waters of the State of pollutants from dead livestock or dead animal disposal facilities are prohibited. Dead livestock and water contaminated by dead livestock shall not be disposed 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 into any part of a CAFO production area.

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.

m) Each CAFO subject to this Subpart must implement the record keeping requirements for the production area found in Sections 502.320(c) through (h).

(Source: Added at 34 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 State.

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, and

9) Location of conduits to surface water including preferential flow paths.

b) The applicant shall utilize the field assessment information obtained in subsection (a) of this Section 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) or this Section and Sections 502.620, 502.625, 502.630, and 502.635 of this Part.

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 (Bray P1 or Mechlich 3) is equal to or less than 300 pounds per acre;

3) the soil loss is less than the erosion factor T calculated using the Revised Universal Soil Loss Equation 2;

4) if conduits on the field are less than 400 feet from surface waters, the setback requirements in 502.645(b)(2) do not apply. Instead the following setbacks apply:

A) Livestock waste application shall be conducted no closer than 150 feet from a tile inlet, agricultural well head, sinkhole, or edge of a ditch that has no vegetative buffer; or

B) Livestock waste application shall be conducted no closer than 50 feet from a tile inlet, agricultural well head, sinkhole, or edge of a ditch that has a vegetative buffer or 50 feet from the center of a grass waterway;

These setbacks do not apply if land application of livestock waste is conducted via injection or incorporation by chisel plow on the contour within 24 hours and a 15 feet vegetative buffer exists between the land application area and conduits to surface water.

5) if conduits on the field are greater than 400 feet from surface waters, the setback requirements in Section (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 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

7) if Nitrogen-based application cannot be conducted in accordance with this Section, then Phosphorus-based application must be conducted as specified in Section 502.615(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 (Bray P1 or Mechlich 3), phosphorus-based application rates must be neutral during the Nutrient Management Plan period;

4) if the soil contains greater than 300 pounds of available soil phosphorus per acre (Bray P1 or Mechlich 3), 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 (Bray P1 or Mechlich 3) greater than 400 pounds per acre.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.620 Protocols to Land Apply Livestock Waste

a) Livestock wastes shall not be discharged to waters of the State. Livestock waste application shall not cause runoff to waters of the State 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 State 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 two methods provided below for determining whether or not 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 by the National Weather Service at

http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/ for the location nearest to the land application area; or

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 QPF category 3 by the National Weather Service at http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm for the location nearest to the land application area.

e) Determination of soil loss must be made for each field using RUSLE2 that accounts for changes in factors affecting runoff, soil erodibility, slope length, slope steepness, cover management and supporting practices.

f) Surface land application may be used when the land slope is no greater than 5% or when the yearly average soil loss is equal to or less than 5 tons per acre per year or erosion factor T, whichever is less, regardless of slope, as determined by the Revised Universal Soil Loss Equation 2, at http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm. Injection or surface application with incorporation within 24 hours shall be used when the land slope is greater than 5% and the yearly average soil loss is greater than 5 tons per acre per year or erosion factor T, whichever is less.

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 10 inches of soil covering fractured bedrock, sand or gravel.

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 20 inches of consolidated material over bedrock.

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.

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

(Source: Added at 34 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 such application is specified in a nutrient management plan and meets the requirements in Section 502.615. Any such application must be consistent with 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. The following sources may be used to obtain the amount of waste generated: Midwest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, Table 2-1, or 35 Ill. Adm. Code 560, Table 1. 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 in at a CAFO.

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 MidWest Plan Service's MWPS-18, Livestock Waste Facilities Handbook (Table 2-1, 10-6, or 10-7), or Midwest Plan Service's MWPS-18, Section 1, Manure Characteristics or the Agency's Agriculture Related Pollution regulations (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 MidWest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, 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 Midwest Plan Service, MWPS-18, Livestock Waste Facilities Handbook, Table 10-2; and

2) The first-year mineralization of organic nitrogen into a plant available form, as obtained from Midwest Plan Service, MWPS-18, Livestock Waste

Facilities Handbook, Table 10-5.

e) Realistic Crop Yield. The realistic crop yield goal shall be determined for each field where the livestock waste is to be applied. The realistic crop yield goal shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The following listing of sources of data shall be utilized to determine the realistic crop yield goal.

1) Proven yields. The proven yield shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The owner or operator shall indicate the method used to determine the proven yield. Data from years with crop disasters may be discarded. Proven yields shall be used unless there is a sound agronomic basis for predicting a different realistic crop yield goal;

2) Crop insurance yields. A copy of the crop insurance yields shall be included in the plan; or

3) Farm Service Agency - United States Department of Agriculture yields. A copy of the assigned crop yields shall be included in the plan.

4) Soils based yield data from the Natural Resources Conservation Service of the United States Department of Agriculture shall be used if the owner or operator cannot obtain a realistic crop yield goal pursuant to subsections (e)(1) through (e)(3) of this Section. A soil map of the application areas shall be included in the plan. The realistic crop yield goal shall be determined by a weighted average of the soil interpretation yield estimates for the areas that will receive livestock waste.

f) Nitrogen Credits

1) Nitrogen credits shall be calculated by the CAFO owner or operator, pursuant to Section 502.505(n)(7) of this Part, 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) of this Section;

2) The realistic crop yield goal of each crop in the field, obtained pursuant to subsection (e)(1) of this Section;

3) The phosphorus amount needed for each crop in the planned crop rotation, expressed as P_2O_5, obtained from the Illinois Agronomy Handbook, incorporated by reference at Section 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 Mechlich 3).

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 shall be 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, incorporated by reference at Section 501.200, or 35 Ill. Adm. Code 560, Appendix A.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.630 Protocols to Land Apply Livestock Waste During Winter

a) Winter Application Prohibition

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;

B) Liquid livestock waste has been injected or incorporated within 24

hours to the extent that soil conditions allow;

C) The owner or operator has taken steps to maximize available storage capacity of manure storage areas;

D) 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 (c)(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 new swine, poultry and veal facilities. The determination of normal precipitation and storm event precipitation shall be based on National Weather Service or State Water Survey Records;

C) The following sources may be used to determine normal precipitation:

i) http://www.isws.illinois.edu/atmos/statecli/Summary/Illinois.htm, or

ii) http://cdo.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl;

D) The owner or operator shall keep a record of the precipitation value

used and the source from which the value was obtained; and

E) 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 (d) of this Section and according to the conditions of subsection (e) of this Section.

b) Winter Application Plan

In order to conduct surface land application on frozen, ice covered, or snow covered ground, the following conditions 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 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 0.25 inches or more of precipitation in a 24 hour period as measured in liquid form by the National Weather Service at http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/ for the location nearest to the land application area; or

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 by the National Weather Service at http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm for the location nearest to the land application area.

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 by the National Weather Service at http://www.nws.noaa.gov/mdl/forecast/graphics/MAV/ for the location nearest to the land application area; or

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 2 by the National Weather Service at http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm for the location nearest to the land application area;

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 at one of the following sources for the location nearest to the land application area, and the owner or operator shall maintain a record of the forecast from the source used:

A) http://www.nws.noaa.gov/mdl/forecast/graphics/MEX/index.html or

B) 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 of 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 of 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 less than the erosion factor T as determined using RUSLE2, and have a median Bray P1 or Mechlich 3 soil level of Phosphorus equal to or less than 300 pounds per acre;

5) Surface Application may only occur after application of three times the otherwise applicable setbacks from 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 ¼ mile setback 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 after application of two times the otherwise applicable setbacks from Sections 502.615 and 502.645. This setback requirement does not include the ¼ mile setback from residences contained in Section

502.645(a).

(Source: Added at 34 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 of the livestock waste application fields 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, incorporated by reference at Section 501.200. Laboratory analysis for soil Bray P1 or Mehlich 3 shall be in accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference at Section 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 required two 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 livestock waste sample shall include, but not be limited to, 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.

(Source: Added at 34 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 34 Ill. Reg. _____, effective _____)

Section 502.645 Land Application Setback Requirements

a) Setbacks from Residences

Livestock waste shall not be land applied within 1/4 mile of any residence not part of the CAFO, unless it is injected or incorporated on the day of application. However, CAFOs that have irrigation systems in operation prior to May 21, 1996, or existing facilities applying waste on frozen ground, are not subject to the provisions of this subsection;

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.

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 land application of livestock waste is conducted via injection or incorporation

by chisel plow on the contour within 24 hours and a 15 feet vegetative buffer exists between the land application area and conduits to surface water.

c) Livestock waste shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used; and

d) Livestock waste shall not be land applied to waters of the State, grassed waterways or other conduits to waters of the State.

e) Livestock waste shall not be land applied within 200 feet of potable water supply wells.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.650 Recordkeeping Requirements for Land Applications Areas

Each CAFO subject to this Subpart must implement the record keeping requirements for the land application area found in Sections 502.320 (j) through (r) and 502.320(z).

(Source: Added at 34 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 point source as of the effective date of these regulations must achieve the livestock waste discharge limitations representing the application of NSPS as of the date of permit coverage.

b) The livestock waste discharge limitations representing New Source Performance Standards 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 502.655.

d) CAFOs subject to this Section shall attain the limitations and requirements in Subpart F as of the date of permit coverage.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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) of this Section, any existing point source subject to this Section shall have no discharge of process wastewater pollutants to waters of the State. Achievement of no process wastewater discharge to waters of the State. 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 State. 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) of this Section apply, any existing point source subject to this Section shall have no discharge of process wastewater pollutants to waters of the State. Achievement of no process wastewater discharge to waters of the State. 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 State.

c) New Source Performance Standards (NSPS) for Horse and Sheep CAFOs
Except as provided in subsection (b)(2) of this Section, any new source subject this Section shall have no discharge of process wastewater pollutants to waters of the State. Achievement of no process wastewater discharge to waters of the State is the performance standard representing New Source Performance Standards for Horse and Sheep CAFOs.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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 applicable of BPT:

1) BOD_5 is limited to a maximum daily limit of 3.66 pounds/1,000 ducks or 1.66 kilograms/1,000 ducks.

2) BOD_5 is limited to a maximum monthly average of 2.0 pounds/1,000 ducks or 0.91 kilograms/1,000 ducks.

3) Fecal coliform is not to exceed 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) of this Section, any new source subject to this Section shall have no discharge of process wastewater pollutants to waters of the State. Achievement of no process wastewater discharge to waters of the State 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 State.

(Source: Added at 34 Ill. Reg. _____, effective _____)

SUBPART H: NEW SOURCE PERFORMANCE STANDARDS FOR NEW, LARGE SWINE, POULTRY AND VEAL 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 applicable livestock waste discharge limitations and technical standards in Subpart F of this Part, except Section 502.605.

c) These limitations and requirements must be attained as of the date of NPDES permit coverage.

(Source: Added at 34 Ill. Reg. _____, effective _____)

Section 502.810 Production Area Requirements

There must be no discharge of livestock waste to waters of the State from the production area unless the CAFO complies with the alternative livestock waste discharge limitations provided in Section 502.830 of this Part.

(Source: Added at 34 Ill. Reg. _____, effective _____)

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 502.655.

(Source: Added at 34 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 Director establish NPDES permit best management practice 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 best management practice 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 Director establishes such livestock waste discharge limitations, "no discharge of livestock waste pollutants," as used in this section, means that the storage structure is designed, operated, and maintained in accordance with best management practices established by the Director 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 34 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) 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.

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 of this Part;

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 by the most recent version of the National Resource Conservation Service's Animal Waste Management (AWM) software. CAFOs may use equivalent design software or procedures as approved by the Agency.

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 listed in subsection (a) of this Section. 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 using the most recent version of the Soil Plant Air Water (SPAW) Hydrology Tool.

1) The evaluation must include all inputs to SPAW 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 internal analysis conducted over a period of 100 years.

3) The Agency may approve equivalent evaluation and simulation procedures.

g) The Agency may waive the requirement in subsection (f) of this Section 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 34 Ill. Reg. _____, effective _____)

Olson, Joanne

From: Jann.Stephen@epamail.epa.gov
Sent: Friday, June 03, 2011 2:29 PM
To: Yurdin, Bruce
Cc: Heacock, Dan; Williams, Deborah; Olson, Joanne; Sofat, Sanjay
Subject: Re: revised Subtitle E--May 17 version
Attachments: IL CAFO rule EPA comments clean 060211.docx

Hi Bruce. Thanks for providing the May 17 draft of the revisions to Subtitle E, and for doing so ahead of schedule. We have read the revisions and are providing the attached comments and recommendations.
Under the work plan (Obj. 2, approach 2), we'll want to work together to resolve the comments and elevate any disagreements as needed to promptly reach resolution, such that you can file the amendments with the Board within 90 days. Thanks again. I look forward to hearing back from you.
Steve.

(See attached file: IL CAFO rule EPA comments clean 060211.docx)

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ATTACHMENT 7b
USEPA Comments on
May 2011 Version

General comment:

Several sections in existing Parts 501 and 502 are not being revised, and were not included in the May 17 draft. Please confirm that these existing sections of Parts 501 and 502 are being retained.

Comments on Part 501:

Subpart B: Definitions and Incorporations

501.222 Agricultural stormwater discharge

The State needs to add "and in compliance with Section 502.102" at the end of the existing definition. Moreover, Illinois should revise 502.222 and 502.102 to provide that unpermitted Large CAFOs must comply with Sections 502.615 (nutrient transport potential), 502.620 c) and d) (no application during precipitation or when the forecast calls for significant rain), and 502.630 a) and c) (winter application prohibition and identification of fields suitable for winter application) in order to qualify for the agricultural storm water exclusion for pollutant additions that will occur as a result of precipitation. Please see 40 CFR 122.23(e); 73 *Federal Register* 70436 ("EPA will evaluate an unpermitted CAFO's nutrient management practices using the technical standards established by the Director as a baseline and expects the same of authorized States.") and 70469 ("This final, revised rule will not change … environmental benefits [compared to the 2003 final rule] since the technical requirements for CAFOs that discharge are not affected and all CAFOs, whether covered by NPDES permits or not, still need to control nutrient releases from the production and land application areas in order to comply with the Clean Water Act."), November 20, 2008; and 71 *Federal Register* 37750, June 30, 2006 ("EPA believes that, in order for the owner or operator of a CAFO to qualify for the statutory agricultural storm water exemption, manure, litter, and process wastewater must be applied in compliance with technical standards that are, in significant part, intended to ensure the appropriate agricultural utilization of the nutrients contained in the manure, litter, and process wastewater.").

501.267 Land application area

Consistent with EPA guidance, we recommend including in this definition situations where the CAFO does not own, rent or lease the land to be used for land application, but where a farmer releases control over the land application area, and the CAFO determines when, where, and how much manure is applied to those lands (*see* NPDES Permit Writers' Guidance Manual and Example NPDES Permit for Concentrated Animal Feeding Operations, EPA-833-B-04-001, December 2003, p. 4-3).

501.305 Man-made and 501.310 Man-made ditch

EPA recommends removing these definitions. EPA does not define these terms in federal regulation. The definitions as written are limiting and do not include human action that was involved in the creation of the conveyance as discussed in EPA guidance (*see* NPDES Permit Writers' Guidance Manual and Example NPDES Permit for Concentrated Animal Feeding Operations, EPA-833-B-04-001, December 2003, p. 3-8).

501.333 New source
This section defines new sources in terms of the effective date of the State regulations. The definition needs to be revised consistent with federal requirements for new sources. As discussed in the preamble to the 2003 CAFO rule, for purposes of applying the new source performance standards in that rule, a source would be a new source if it commences construction after April 14, 2003 (*see* 40 CFR 122.2). 68 Federal Register 7200 (February 12, 2003). See, also, the definition of "new source" in 40 CFR 122.2 This revision will be particularly important in the case of new large swine, poultry and veal CAFOs, which are subject to more stringent production area effluent limitations than existing sources.

501.358 Production Area
Consistent with the federal definition the word "any" needs to be added to the definition of production area so the definition reads "...or egg processing facility, and **any** area used in the storage, handling..." (*see* 40 CFR 122.23(b)(8)).

Subpart C: Operational Rules for All Livestock Management Facilities and Livestock Waste-Handling Facilities
501.505 Large Unpermitted AFO Registration
Part 501 does not define an AFO by size. EPA recommends changing the term AFO in this section to CAFO.

Comments on Part 502:

Subpart A: Permits Required
502.101 NPDES Permit Requirement and Duty to Maintain Permit Coverage
502.101(a) Consistent with Section 301 of the CWA and 40 CFR 123.1(g)(1) this section should read as follows, " ... Any discharge of pollutants into waters of the State from a CAFO is prohibited unless **authorized by** an NPDES permit ..."

502.101(d) Language regarding CAFOs that will not discharge should be consistent in both sections 502.101(d) and 502.204.

502.101(e) The term "new CAFO" is not defined. The State needs to include a definition of "new CAFO" and clarify the difference between a "new CAFO" and a "new source" as defined in section 501.333.

502.102 Land Application Discharges and Agricultural Stormwater
502.102(b) The following bold language needs to be added to this section to ensure that unpermitted large CAFOs implement required nutrient management plants, " and in compliance with Section 502.510 for permitted CAFOs and **in compliance with a nutrient management plan meeting the elements specified in** Section 502.510(b) for unpermitted large CAFOs, ..."

502.102(d) EPA recommends that the following bold language be added to this section and livestock facility owner or operator be changed to CAFO owner or operator. This section should read as follows, "The nutrient management practices to be implemented **at all CAFOs** shall be reviewed annually by the CAFO owner or operator and the …"

502.106 Case-by-case designation requiring NPDES permits

502.106 (d) The second sentence of this section allows Illinois EPA to issue an NPDES permit with a compliance schedule of up to 14 months for a designated CAFO to comply with the Illinois Environmental Protection Act and applicable regulations. This sentence authorizes extension of deadlines for compliance with federal requirements, and needs to be deleted.

Subpart B: Permit Applications
502.204 Renewal
Language regarding CAFOs that will not discharge should be consistent in both sections 502.204 and 502.101(d).

Subpart C: Permit Issuance and Conditions
502.310 CAFOs Seeking Coverage Under NPDES General Permits
502.310(c) Consistent with 40 CFR 122.23(h), this section needs to be revised to add "and make available for public review and comment the draft terms of the nutrient management plan to be incorporated into the permit."

502.320 Recordkeeping Requirements
502.320(s) This section needs to be revised to include "ducks" in the list of types of animals to be reported.

Subpart E: Requirements for Developing and Implementing Nutrient Management Plans
502.505 Nutrient Management Plan Items
502.505(m)(4) EPA recommends adding the following language to the end of this section, "…determined pursuant to section 502.625."

502.510 Nutrient management plan contents

502.510(b)(11) In the Dec 2010 draft rule this section prohibited livestock waste from being applied within setbacks from waters as provided in 502.645. The May 2011 revised draft rule removed these requirements for setbacks from waters. Consistent with 40 CFR 412.4(c)(1) a CAFO must develop and implement a nutrient management plan that incorporates setback requirements from surface waters and conduits to surface waters, therefore, the State must revise this section to include setback requirements from surface waters.

502.510(b)(12) This section requires that the winter time land application plan meet only the requirements of section 502.630(c). The winter time land application plan should meet all applicable requirements set forth in section 502.630. This section should be changed to read as follows, "...meets the requirements of Section **502.630** of this Part".

502.510(b)(13) This section should be changed to read "Inspections of subsurface drainage systems shall include visual inspection prior to land application to determine failures that may cause discharges and visual inspection after land application to identify discharges.".

Subpart F: Livestock Waste Discharge Limitations and Technical Standards for CAFOs
502.615 Nutrient Transport Potential

502.615(c)(4) This last sentence of this section establishes a compliance alternative to setback requirements similar to a compliance alternative established in 502.645(b)(3). EPA's comment applies to both 502.615(c)(4) and 502.645(b)(3). As provided for in federal regulations, compliance alternatives are an option that can be demonstrated by the CAFO (*see* 40 CFR 412.4(c)(5)(ii)). Sections 502.615(c)(4) and 502.645(b)(3) offer the compliance alternative to all CAFOs without requiring a CAFO to make a demonstration that CAFO specific implementation of such alternative practices or field specific conditions will provide pollutant reductions equivalent or better than the federal setback requirements. Although IEPA did provide information which provides support that equivalent or better reductions may occur with a 15-foot wide vegetative buffer, the federal requirements establish that a CAFO make such a demonstration. The State should revise these sections to provide for such a compliance alterative upon demonstration by the CAFO that equivalent or better reductions will be achieved. Alternatively, the State could include more general language in Part 502 that provides CAFOs the opportunity to demonstrate a compliance alternative to the state required setbacks.

502.615(c)(4)(B) The first part of this section, "Livestock waste application shall be conducted no closer than 50 feet ... ditch that has a vegetative buffer" provides an exception to setback requirements that is not consistent with the federal setback requirements established in 40 CFR 412.4(c)(5). The federal setback requirements prohibit land application of livestock wastes closer than 100 feet to any down-gradient surface water or conduits to surface waters unless a 35-foot wide vegetative buffer compliance alternative is used (*see* 40 CFR 412.4(c)(5)(i)). The first part of this section allows land application as close as 50 feet from conduits to surface water provided a vegetative buffer exists. The State needs to revise this provision in this section to be consistent with the federal setback requirements.

502.615(d)(4) and (5) These paragraphs establish requirements for phosphorus-based application of livestock waste. The requirements are less stringent than provided in Special Condition 4.c.v. of Illinois' current CAFO general permit. They are less stringent than the requirements established by Michigan and Ohio. Please see section I. A. 4. b. 7) c) of the Michigan general permit issued in March 2010 and ch. 901 of the Ohio Admin. Code, 10-2-14, Appendix E, table 2. (Ohio allows use of a phosphorus index as an alternative to a soil test method for establishing phosphorus application rates.)

502.620 Protocols to Land Apply Livestock Waste

502.620(b) This section needs to be changed to read "Discharge of livestock waste to waters of the State or off-site through subsurface drains is prohibited, unless the discharge is an agricultural stormwater discharge as defined by section 501.222."

502.620(d) EPA appreciates that Illinois created paragraph (d) in this section. Illinois should supplement the text to establish 0.25 inches of precipitation as the trigger for a prohibition relative to surface application on Hydrologic Soil Group C and D soils. Please see pages O-6 and M-2, 3, and 4 of Managing Manure Nutrients at Concentrated Animal Feeding Operations, EPA-821-B-04-006, August 2004.

502.630 Protocols to Land Apply Livestock Waste During Winter

502.630(a)(3) The references to subsections (d) and (e) need to be changed to reference subsections (b) and (c), respectively.

502.630(b)(2). The first sentence in Section 502.620 a) establishes a more protective standard than provided in 502.630 b) 2). Illinois should revise 502.630 b) 2) so it is consistent with 502.620 a) or strike 502.630 b) 2) and clarify in the first sentence of 502.630 b) that the provisions in 502.620 a), b), c), and l) apply to application in the winter as well as other times of the year. We prefer the latter approach.

502.630(b)(3) This section states that land application on frozen ground shall not occur within 24 hours preceding a forecast of 0.25 inches of precipitation in a 24 hour period as measured in liquid form. This provision should be revised consistent with 502.630(d)(4) regarding application on ice or snow covered land, to specify that application shall not occur if more than a trace amount of rain (0.1 inch) is forecast. Dunne and Black (1971) and Dunne, et al., (1976) reported that the infiltration capacity of soils with concrete frost can be lowered to 0.02 centimeters or less per hour. Thompson, et al., (1979) stated that as little as one inch of concrete frost prevents infiltration. Mitchell, et al., (1997) proposed that, for frozen soil, the potential maximum retention after runoff begins, S, in the USDA-NRCS equation for net storm rain is one-tenth of the potential for unfrozen soil.

502.630 c) provides criteria for determining the suitability of land for winter application. Based on assessment using the Winter Spreading Technical Guidance in Appendix L of EPA's Managing Manure at Concentrated Animal Feeding Operations, we believe that the criteria in this paragraph will not minimize the risk of nutrient movement to waters when liquid dairy manure is surface applied on snow or ice[1]. Under the Technical Guidance, the Hydrologic Soil Group of soil, settleability of BOD in manure, and rate at which organic matter and water is applied as manure are key variables affecting the estimate of the quantity of pollutants that will

[1] We read 502.630 a) 1), including subparagraph F), to establish an unqualified prohibition applicable to surface land application solid livestock waste given that the manager of a solid livestock waste should never encounter a situation where a discharge from a storage structure is expected to occur due to a shortage of storage capacity, given that solid waste can be managed in a stockpile including a temporary stockpile.

runoff when snow and ice melts. Illinois needs to prohibit surface application of liquid dairy manure on snow covered and ice covered soil[2]. Illinois should prohibit surface application of other liquid manure on Hydrologic Soil Group D soil.

502.635 Manure and Soil Sampling

502.635(b)(2) Consistent with 40 CFR 412.4(c)(3), which requires manure to be analyzed for nitrogen and phosphorous content, this section should be revised to require sampling for all nitrogen species and/or total nitrogen.

502.645 Land Application Setback Requirement

502.645(b)(1) provides that livestock waste can be land applied within 200 feet of surface water if there is adequate diking. Language needs to be added to establish that the term "adequate diking" has the effect of making the land application area down gradient from surface waters and conduits thereto.

502.645(b)(3) See comment for 502.615(c)(4) above.

[2] Wright (oral communication 2004) reported that 90 percent of the BOD is dairy manure is not settleable.

CERTIFICATE OF SERVICE

Joanne M. Olson, Assistant Counsel for the Illinois EPA, herein certifies that she has served a copy of the foregoing NOTICE OF FILING and PREFILED ANSWERS OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY upon persons listed on the Service List by mailing, unless otherwise noted on the Service List, a true copy thereof in an envelope duly addressed bearing proper first class postage and deposited in the United States mail at Springfield, Illinois on August 13, 2012.

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