

ILLINOIS POLLUTION CONTROL BOARD  
July 29, 2021

IN THE MATTER OF: )  
)  
AMENDMENTS TO 35 ILL. ADM. CODE ) R18-25  
SUBTITLE E: AGRICULTURE RELATED ) (Rulemaking – Water)  
POLLUTION )

Proposed Rule. Proposal for Public Comment.

OPINION AND ORDER OF THE BOARD (by J. Van Wie):

The Board opened this docket to amend its agriculture related water pollution regulations (35 Ill. Adm. Code 501-506). Today, for public comment, the Board proposes non-substantive amendments to ensure the rules are current, clear, and concise. In this opinion and order, the Board provides background on the rulemaking’s objectives, discusses the proposed amendments, requests comment, and concludes with information on how the rulemaking will proceed.

**BACKGROUND**

In 2016, the Board began reviewing its rules to identify obsolete, repetitive, confusing, or otherwise unnecessary language. Under that on-going initiative, the Board has completed seven rulemakings, updating its rules on noise, biological materials, mine-related water pollution, Right-to-Know, and procedure.<sup>1</sup>

On January 10, 2018, the Illinois Environmental Protection Agency (IEPA) filed a proposal to update the Board’s environmental rules across multiple media and subject areas, including Part 501 of the Board’s agriculture related water pollution rules. IEPA considers its proposed amendments to be non-substantive. Clean-Up Amendments to 35 Ill. Adm. Code Parts 201, 211, 212, 214, 215, 216, 217, 218, 219, 225, 228, 232, 301, 302, 303, 304, 306, 309, 401, 402, 403, 404, 405, 501, 611, 615, 616, 617, 722, 811, 813, 855, and 100 (Clean-Up Amendments, R18-21, slip op. at 2 (Feb. 8, 2018). The Board accepted IEPA’s proposal for hearing by order on February 8, 2018. *Id.*

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<sup>1</sup> See Amendments to 35 Ill. Adm. Code Subtitle D: Mine-Related Water Pollution, R18-24 (Sept. 19, 2019); Amendments to 35 Ill. Adm. Code Subtitle O: Right-to-Know, R18-30 (Sept. 19, 2019); Amendments to 35 Ill. Adm. Code Subtitle M: Biological Materials, R18-29 (Aug. 22, 2019); Proposed Amendments to General Procedural Rules (35 Ill. Adm. Code 101), R19-19 (Aug. 22, 2019); Noise Rule Update: Amendments to 35 Ill. Adm. Code Parts 900, 901, 902, and 910, R18-19 (Nov. 1, 2018); Procedural Rule Amendments: Proposed Amendments to 35 Ill. Adm. Code 101 through 130, R17-18 (June 22, 2017); Procedural Rule Amendments: Proposed Amendments to 35 Ill. Adm. Code 101 through 125, R16-17 (May 19, 2016).

On March 22, 2018, the Board split IEPA's proposal into eight dockets – each one dedicated to considering non-substantive rule amendments within a different subtitle of the Board's rules. Clean-Up Amendments, R18-21, slip op. at 1 (Mar. 22, 2018). This docket – R18-25 – was opened on March 22, 2018 and in it the Board will consider amendments only to its Subtitle E agriculture related water pollution regulations (35 Ill. Adm. Code 501-506). *Id.* at 1-2.

The rule amendments proposed by the Board in this order consist of both IEPA's amendments and additional amendments identified by the Board. The amended sections are attached to this order.

### **SUMMARY OF PROPOSED AMENDMENTS**

The Board's agriculture related pollution regulations contain requirements necessary for owners and operators of livestock management facilities or livestock waste-handling facilities in the State "to prevent pollution of the air and waters of Illinois caused by failure to plan with regard to proper environmental safeguards the construction, location and operation of certain livestock management facilities and livestock waste-handling facilities." 35 Ill. Adm. Code 501.102.

The Board proposes non-substantive amendments to remove redundant or unnecessary language, replace outdated language, update statutory references, and reorganize provisions for clarity. IEPA proposes amendments to delete outdated provisions, appropriately match incorporations by reference, eliminate redundancies and correct citations. Further explanation of IEPA's proposed changes can be found in the initial filing in this matter. Clean-Up Amendments, R18-21, at 27-29 (Jan. 10, 2018).

### **PUBLIC COMMENT**

The Board welcomes public comment from any participant on any aspect of its proposal. Public comments must be filed electronically through the Clerk's Office On-Line (COOL) on the Board's website ([pcb.illinois.gov](http://pcb.illinois.gov)). The comment should indicate the docket number for this rulemaking, R18-25. Questions about filing comments can be directed to the Clerk's Office at (312) 814-3461. Public comments and other filings with the Clerk must be served on the hearing officer and on those persons on the Service List for this rulemaking. The current version of the Service List for R18-25 is available on COOL.

### **CONCLUSION**

The Board proposed these non-substantive amendments to the agriculture related water pollution rules for public comment without submitting them to first-notice publication in the *Illinois Register*. The proposed amendments appear in the addendum to this opinion and order. The proposed additions from IEPA are in double underline and the proposed deletions from IEPA are in double strike-through. The proposed additions from the Board are underlined and the proposed deletions from the Board are stricken through. The Board intends to hold two

hearings on this proposal in Chicago and Springfield. *See* 35 Ill. Adm. Code 101.600(b), 102.114. Interested persons should contact the hearing officer Mark Kaminski (Mark.Kaminski@Illinois.gov) to be added to this docket's Notice List or Service List.

IT IS SO ORDERED.

I, Tim Fox, Acting Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on July 29, 2021, by a vote of 4-0.

A handwritten signature in black ink, appearing to read "Tim Fox". The signature is written in a cursive, somewhat stylized font.

Tim Fox, Acting Clerk  
Illinois Pollution Control Board

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

PART 501  
GENERAL PROVISIONS

SUBPART A: AUTHORITY AND POLICY

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

SUBPART B: DEFINITIONS AND INCORPORATIONS

Section	
501.200	Incorporations by Reference
501.201	Definitions
501.205	Act
501.210	Administrator
501.215	Air Pollution
501.220	Agency
501.223	Animal Confinement Area
501.225	Animal Feeding Operation
501.230	Animal Unit
501.235	Board
501.236	Chemicals and Other Contaminants
501.238	Concentrated Animal Feeding Operation (CAFO)
501.240	Construction
501.241	CWA
501.242	Dry Lot
501.244	Erosion Factor T
501.245	Existing Livestock Management Facility and Livestock Waste-Handling Facility
501.246	Expansion
501.248	Farm Residence
501.250	Feedlot Runoff
501.252	Frozen Ground
501.253	Grassed Waterway
501.254	Groundwater
501.255	Holding Pond
501.260	Impermeable
501.261	Incorporation
501.263	Injection
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  
501.313 Manure Storage Area  
501.315 Manure Storage Structure  
501.317 Maximum Feasible Location  
501.320 Modification  
501.325 Navigable Waters (Repealed)  
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 / Operator  
501.350 Person  
501.355 Pollutant  
501.356 Populated Area  
501.357 Process Wastewater  
501.358 Production Area  
501.359 Raw Materials Storage Area  
501.360 Revised Universal Soil Loss Equation (RUSLE2)  
501.361 Saturated  
501.363 Setbacks  
501.365 Silvicultural Point Source  
501.370 Standard of Performance  
501.372 Supernatant  
501.373 Surface Land Application  
501.375 Temporary Manure Stack  
501.377 Vegetative Buffer  
501.378 Vegetative Fence Row  
501.379 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

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

501.APPENDIX A References to Previous Rules

AUTHORITY: Implementing and authorized by Sections 9, 12, 13, 21, 22 and 27 of the Environmental Protection Act (Ill. Rev. Stat. 1989, ch. 111 1/2, pars. 1009, 1012, 1013, 1021, 1022 and 1027).

SOURCE: Filed and effective January 1, 1978; amended at 2 Ill. Reg. 4, p. 137, effective October 30, 1978; codified at 7 Ill. Reg. 10592; amended in R90-7 at 15 Ill. Reg. 10075, effective July 1, 1991; amended in R12-23 at 38 Ill. Reg. 17661, effective August 11, 2014; amended in R18-25 at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

SUBPART A: AUTHORITY AND POLICY

**Section 501.101 Authority (Repealed)**

~~Pursuant to authority granted by Sections 9, 12, 13, 21 and 22 of the Environmental Protection Act, which empowers the Board to designate equipment or facilities capable of causing or contributing to air and water pollution and to set standards for the issuance of permits for the construction, installation and operation and for the inspection of said equipment or facilities; and to adopt regulations to promote the purpose of the Act which prohibits the deposit of any contaminants upon the land in such a place and manner as to create a water pollution hazard; and to set standards limiting the amounts or concentrations of contaminants that may be discharged into the waters; and to set standards for the disposal of any refuse and to set procedures for monitoring and reporting contaminant discharges at their source; and which directs the Board to adopt requirements, standards and procedures which will enable the State to implement and participate in the National Pollutant Discharge Elimination System (NPDES) established by the Federal Water Pollution Control Act Amendments of 1972 and 1977 also called the Clean Water Act (CWA) (12 U.S.C. 24; 15 U.S.C. 633 and 636; 31 U.S.C. 711; 33 U.S.C. 1251 et seq.), the Board adopts the following rules and regulations.~~

(Source: Repealed at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## Section 501.102 Policy

- a) It is the purpose of the General Assembly in adopting the Environmental Protection Act to restore, maintain and enhance the purity of the air and waters of Illinois ~~in order~~ to protect health, welfare, property and the quality of life. An adequate supply of healthy livestock is essential to the well-being of Illinois citizens and the nation. They provide the daily source of meat, milk and eggs. Their efficient, economic production must be the concern of both producers and consumers if we are to have a continued abundance of high quality, wholesome food and of other livestock products at reasonable prices. The policy ~~must~~ shall be to establish regulations that will provide a balance between a wholesome environment and the efficient production of adequate livestock products.
- b) Livestock produce wastes which, when properly used, supply nutrients and organic matter to soils. The mere presence of livestock waste in a given location does not denote pollution, but may, when improperly stored, transported or disposed of, undesirably affect the environment.
- c) It is ~~hereby~~ determined that the construction, establishment and operation of ~~certain~~ specified livestock management facilities and livestock waste-handling facilities without environmental planning and safeguards or the use of ~~certain~~ specified livestock wastes for agricultural purposes causes, threatens or allows the discharge of contaminants into the air or waters of Illinois so as to cause or threaten to cause pollution or to render ~~such~~ those waters harmful to public health, safety or welfare or to domestic, commercial, industrial, agricultural and recreational uses or to man, livestock, wild animals, birds or fish or other aquatic life.
- d) It is ~~hereby~~ determined that the construction, establishment and operation of livestock management facilities and livestock waste-handling facilities without environmental planning and safeguards or the use of livestock wastes for agricultural purposes causes, threatens or allows air pollution, *The discharge of contaminants into the air of Illinois in sufficient quantities and of such characteristics and duration as to be injurious to human, plant, or animal life, to health, or to property, or to unreasonably interfere with the enjoyment of life or property.* [415 ILCS 5/3.115] ~~THE DISCHARGE OF CONTAMINANTS INTO THE AIR OF ILLINOIS IN SUFFICIENT QUANTITIES AND OF SUCH CHARACTERISTICS AND DURATION AS TO BE INJURIOUS TO HUMAN, PLANT OR ANIMAL LIFE, TO HEALTH, OR TO PROPERTY, OR TO UNREASONABLY INTERFERE WITH THE ENJOYMENT OF LIFE OR PROPERTY. (Ill. Rev. Stat. ch. 111 1/2 par. 1003.2)~~ It is recognized that the presence of odor is an inherent characteristic of livestock management facilities and livestock waste-handling facilities, and that the detection of ~~such~~ that odor ~~does is~~ not per se constitute air pollution.

- e) It is the purpose of this Chapter to prevent pollution of the air and waters of Illinois caused by failure to plan ~~with regard to~~ regarding proper environmental safeguards the construction, location and operation of ~~certain~~ specified livestock management facilities and livestock waste-handling facilities. A permit system is established to ensure that ~~such~~ those activities take account of environmental considerations and to meet the requirements for federal approval, as established by the CWA. It is also the purpose of these regulations to prevent pollution from the numerous point and non-point discharges, both continuous and fluctuating, which are present in ~~certain~~ specified livestock management facilities or livestock waste-handling facilities. To this end, procedural safeguards are required, in addition to compliance with the CWA, NPDES filing requirements and the feedlot category of point source effluent guidelines.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.104 Severability**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## **SUBPART B: DEFINITIONS AND INCORPORATIONS**

### **Section 501.200 Incorporations by Reference**

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

ASABE. American Society of Agricultural and Biological Engineers, 2950 Niles Road, St. Joseph, MI 49085 (269-429-0300), fax 269-429-3852, [hq@asabe.org](mailto:hq@asabe.org)

"Management of Manure Odors," ASABE, EP379.4 (January 2007).

"Design of Anaerobic Lagoons for Animal Waste Management," ASABE, EP403.4 (R2011)

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

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



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

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

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

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

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

"NOAA Atlas 14: Precipitation Frequency Atlas of the United States," United States Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, Volume 2, Version 3.0 (2004), revised 2006. Available from NOAA, NWS, Office of Hydrologic Development, 1325 East West Highway, Silver Spring MD 20910 (Available online at [http://www.nws.noaa.gov/oh/hdsc/PF\\_documents/Atlas14\\_Volume2.pdf](http://www.nws.noaa.gov/oh/hdsc/PF_documents/Atlas14_Volume2.pdf)).

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

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

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

"Agricultural Waste Management Field Handbook," United States Department of Agriculture, Natural Resources Conservation Service (2009). Available from USDA, NRCS, 1400 Independence Ave., S.W., Washington, DC 20250.

(Available online at  
<http://directives.sc.egov.usda.gov/viewerFS.aspx?hid=21430>).

"Design of Anaerobic Lagoons for Animal Waste Management", as incorporated by reference at Section 501.200.

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## SUBPART B: DEFINITIONS

### Section 501.201 Definitions

- a) Except as otherwise stated in this Part, and unless a different meaning of the term is clear from its context, the definitions of terms used in this Chapter ~~are 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~~ apply to 35 Ill. Adm. Code 501, 502 and 503.

(Source: Amended at 45 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: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 501.225 Animal Feeding Operation

- a) A lot or facility (other than an aquatic animal production facility) where the following conditions are met:
- 1) Animals have been, are or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and
  - 2) Crops, vegetation, forage growth or post-harvest residues that are grown in place are not sustained in the normal growing season over any portion of the lot or facility.

- b) Two or more animal feeding operations under common ownership are ~~deemed~~ considered to be a single animal feeding operation if they are adjacent to each other or if they ~~utilize~~ use a common area or system for the disposal to dispose of wastes.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.238 Concentrated Animal Feeding Operation (CAFO)**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.240 Construction**

~~Commencement~~ Start of on-site fabrication, erection or installation.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.245 Existing Livestock Management Facility and Livestock Waste-Handling Facility**

Any livestock management facility and livestock waste-handling facility the construction or modification of which ~~has commenced prior to~~ started before the effective date of this Chapter.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.246 Expansion**

~~Commencement~~ Start of construction at a livestock management facility or livestock waste-handling facility where the fixed capital cost of the new components constructed within a 2-year period exceeds 50% of a comparable entirely new facility's ~~the fixed capital cost of a comparable entirely new facility.~~

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.248 Farm Residence**

Any residence on a farm owned or occupied by the farm owners, operators, tenants or seasonal or year-round hired workers. For ~~purposes of~~ this definition, a "farm" is the land, buildings, and machinery used in the commercial production of farm products, and "farm products" are those plants and animals and their products which are produced or raised for commercial purposes and include ~~Pa~~ forages and sod crops, grains and feed crops, dairy and dairy products, poultry and poultry products, livestock, fruits, vegetables, flowers, seeds, grasses, trees, fish, honey and other

similar products, or any other plant, animal, or plant or animal product which supplies people with food, feed, fiber, or fur.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.290 Livestock Shelter**

Any covered structure, including ~~but not limited to~~ livestock houses or barns, in which livestock are enclosed at any time.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.295 Livestock Waste**

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 polluted by livestock, including ~~but not limited to~~ soils and sludges removed from livestock waste storage structures. Livestock waste does not include agricultural stormwater discharge.

(Source: Amended at 38 Ill. Reg. 17661, effective August 11, 2014)

### **Section 501.300 Livestock Waste-Handling Facility**

Individually or collectively those constructions or devices, except sewers, used for collecting, pumping, treating or disposing of livestock waste or for the recovery of by-products from ~~such~~ livestock waste. ~~Such a~~ The facility includes acceptable disposal areas, such as pasture or other suitable agricultural land, which can serve as an adequate filtering device to settle out and assimilate pollutants from livestock waste before the clarified water reaches a stream or other body of surface water or groundwater.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.313 Manure Storage Area**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.317 Maximum Feasible Location**

Any location for ~~the establishment of~~ establishing a new livestock management facility or new livestock waste-handling facility where one of the following conditions exists:

- a) The site is located closer to the livestock owner's or operator's residence than to a neighboring farm or non-farm residence or populated area; or
- b) The site is adjacent to an existing livestock management facility or livestock waste-handling facility, or is farther away from a neighboring farm or non-farm residence or populated area than the existing livestock management facility or livestock waste-handling facility, when the livestock owner or operator does not reside on the farm where the livestock are to be kept or raised; or
- c) The site is accessible to roads, water and electricity and is at the farthest location from a neighboring farm or non-farm residence or populated area; there is no existing livestock management facility or livestock waste-handling facility on the site, and the livestock owner or operator does not reside on the farm where the livestock are to be kept or raised.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.320 Modification**

~~Such~~ The physical change in or alteration in the method of operation of any livestock management facility or livestock waste-handling facility which increases the ~~amount~~ of livestock waste amount over the level authorized by the NPDES permit.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.330 New Livestock Management Facility and New Livestock Waste-Handling Facility**

Any livestock management facility or livestock waste-handling facility the construction or modification of which is ~~commenced on or after January 1~~ started after December 31, 1978 1977.

(Source: Amended at 45 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~~ started after either of the following dates:

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.335 NPDES**

The National Pollutant Discharge Elimination System for issuing, establishing conditions for and denying permits under Section 402 of the CWA. All terms used ~~in connection with regarding~~ NPDES which have been defined in the CWA or regulations adopted ~~thereunder shall~~ have the meanings specified ~~therein in the CWA or regulations~~, unless specifically noted otherwise.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.340 NPDES Permit**

A permit issued ~~underpursuant to~~ the NPDES.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.359 Raw Materials Storage Area**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.363 Setbacks**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.365 Silvicultural Point Source**

Any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting or log storage facilities which are operated ~~in connection with~~ for silvicultural activities and from which pollutants are discharged into navigable waters.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.370 Standard of Performance**

A standard for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through ~~application~~ of applying the best available demonstrated control technology, processes, operating methods, or

other alternatives, including, where practicable, a standard permitting no discharge of pollutants, as defined in Section 306 of CWA.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.377 Vegetative Buffer**

Narrow, permanent strip of dense perennial vegetation established parallel to the land contours of ~~the land~~ and perpendicular to the field's dominant slope of ~~the field~~ for ~~the purposes of~~ slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.379 Waste Containment Area**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.380 Water Pollution**

~~Such~~ The alteration of the physical, thermal, chemical, biological or radioactive properties of any waters of the State, or ~~such~~ the discharge of any contaminant into any waters of the State, as will or is likely to create a nuisance or render ~~such~~ the waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate uses, or to man, livestock, wild animals, birds or fish or other aquatic life.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## **SUBPART C: OPERATIONAL RULES**

### **Section 501.401 Purpose and Scope of Operational Rules for Livestock Management Facilities and Livestock Waste-Handling Facilities**

- a) Besides the regulations contained within this Chapter, every person must~~shall~~ also comply with ~~provisions of~~ the Act and other Board regulations.
- b) The owner or operator of any livestock management facility or livestock waste-handling facility must~~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~~ must determine whether the facility is subject to NPDES permit requirements and to follow those requirements when

and where they are ~~applicable~~ apply. CAFOs are subject to additional requirements applicable under 35 Ill. Adm. Code 502.

- c) This Subpart ~~shall apply~~ applies to stockyards and similar operations where animals are held briefly, as well as to conventional livestock operations.
- d) The transportation of livestock wastes ~~must~~ shall be planned and conducted so as not to cause, threaten, or allow any violation of the Act and applicable regulations.
- e) Any runoff or overflow from a livestock management facility or a livestock waste handling facility ~~must~~ shall not cause a water quality violation under ~~pursuant to~~ the Act or 35 Ill. Adm. Code Subtitle C: Water Pollution.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

- a) No new livestock management facility or new livestock waste-handling facility ~~can~~ 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 ~~must~~ shall be protected against ~~such~~ that flood.
- c) Limitations Effective July 15, 1991
  - 1) Upon July 15, 1991, new or expanded livestock management facilities and new or expanded livestock waste-handling facilities ~~must~~ shall not be located within ½ mile of a populated area or within ¼ mile of a non-farm residence.
  - 2) For ~~purposes of this~~ subsection (c), the following ~~must~~ shall not be considered location of a new or expanded livestock management or waste-handling facility:
    - A) ~~Commencement~~ Start of operations at an idle facility which has livestock shelters left intact, and that has been operated as a livestock management facility or livestock waste-handling facility for four consecutive months at any time within the 10 previous years;



- B) ~~Commencement~~ Start 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 ~~must~~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) ~~do~~shall not apply to any livestock management facility or livestock waste-handling facility that meets any of the following conditions:
- 1) The facility is located in an agricultural area, so designated ~~as such~~ under~~pursuant to~~ the Agricultural Areas Conservation and Protection Act, [505 ILCS 5];
  - 2) The facility undergoes expansion, and the ~~owner of the facility~~ owner certifies and notifies the Agency in writing that the facility was operating as a livestock management facility or livestock waste-handling facility for at least one year ~~prior to~~ before the existence of any non-farm residence within ¼ mile of the facility or of a populated area within ½ mile of the facility; or
  - 3) The use of the facility as a livestock management or livestock waste handling facility is allowed by local zoning or municipal ordinance. If no local zoning or municipal ordinance exists that covers that use, the facility ~~is~~shall be exempt if the livestock are not raised or kept at the facility primarily for hire or the raising or keeping of livestock at the facility does not have financial profit as a primary aim.
- e) A new livestock management facility or new livestock waste-handling facility that locates within ¼ mile of a neighboring farm residence ~~must~~shall locate at the maximum feasible location from that residence.
- f) A new livestock management facility or new livestock waste-handling facility that locates within ¼ mile of a non-farm residence or within ½ mile of a populated area, as allowed by subsection (d), ~~must~~shall locate at the maximum feasible location from the 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 ~~must~~shall be constructed in such a way that pollution will be prevented, or supplementary measures ~~must~~shall be adopted that will prevent pollution.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.403 Protection of Livestock Management Facilities and Livestock Waste-Handling Facilities**

- a) Existing livestock management facilities and livestock waste-handling facilities must~~shall~~ have adequate diversion dikes, walls or curbs that will prevent excessive outside surface waters from flowing through the animal feeding operation and will direct runoff to an appropriate disposal, holding or storage area. The diversions are required on all aforementioned structures unless there is negligible outside surface water which can flow through the facility or the runoff is tributary to an acceptable disposal area or a livestock waste-handling facility. If inadequate diversions cause or threaten to cause a violation of the Act or applicable regulations, the Agency may require corrective measures.
  
- b) New livestock management facilities and livestock waste-handling facilities must~~shall~~ have adequate diversions, dikes, walls or curbs that will prevent excessive outside surface runoff waters from flowing through the animal feeding operation and will direct runoff to an appropriate disposal, holding or storage area. The diversions are required on all aforementioned structures unless there is negligible outside surface water which can flow through the facility or the runoff is tributary to an acceptable disposal area or a livestock waste-handling facility. A holding pond must be capable of storing a volume equal to or exceeding the ~~area of the~~ animal feeding operation's area, plus any tributary area not a part of the animal feeding operation (including roof area if tributary to the facility), multiplied by 12 inches for runoff from earthen areas or 15 inches for runoff from concrete areas 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. In no case must~~shall~~ the storage volume of the containment facility be less than the 25-year 24-hour storm effluent guidelines as required by the new source performance standards of the U.S. Environmental Protection Agency in 40 C.F.R. 412~~for the feedlot point source category~~.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.404 Handling and Storage of Livestock Waste**

- a) Any livestock waste stored in excess of six months must~~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 ~~must~~ shall not be located within 75 feet from any water well, except monitoring wells.
- 3) A temporary manure stack ~~must~~ shall be constructed or established and maintained in a manner to prevent runoff and leachate from entering surface waters or groundwaters. A cover and pad or other control must be provided to prevent runoff and leachate from entering surface waters and groundwater.

c) Livestock Waste-Holding Facilities

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

d) Runoff Field Application Systems

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

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 501.405 Field Application of Livestock Waste**

- a) For livestock management facilities and livestock waste handling facilities that are not required to obtain an NPDES permit, the quantity of livestock waste applied on soils ~~must shall~~ not exceed a practical limit as determined by soil type, especially its permeability, the soil 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 ~~under pursuant to~~ 35 Ill. Adm. Code 502.305, unless otherwise provided for by Board regulations. Facilities required to obtain an NPDES permit are subject to the requirements in 35 Ill. Adm. Code 502. Subpart F. Unpermitted Large CAFOs claiming an agricultural stormwater exemption must comply with 35 Ill. Adm. Code 502.102 and the practices listed in Section 502.510(b) to qualify for the exemption.
- b) Operators of livestock waste handling facilities ~~must 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 used for irrigation purposes has been stored in a livestock waste lagoon system that ~~is designed and operated in accordance~~ complies with "Design of Anaerobic Lagoons for Animal Waste Management", as incorporated by reference at Section 501.200.
- 4) Other methods as described in "Management of Manure Odor", as incorporated by reference at Section 501.200.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### **Section 501.406 Inspections and Disease Prevention**

- a) The Agency ~~has shall have~~ the authority to enter at all reasonable times upon any private or public property for ~~the purpose of inspecting and investigating to ascertain possible violations of the Act or regulations thereunder, in compliance~~ accordance with constitutional limitations, except that ~~a no~~ representative of the Agency must shall not enter a livestock management facility or livestock waste-handling facility unless sanitized footwear and sanitized outer garments provided by the Agency are used (unless waived by the farm owner or operator) and any other reasonable disease prevention procedures or equipment, as provided by ~~the owner or operator of the facility~~ owner or operator, are ~~utilized~~ used.
- b) The activities of inspecting and investigating include:
  - 1) Having access to and the right to copy any records required to be kept under the terms of the permit; and
  - 2) Having access to, sampling and monitoring any discharge of pollutants to ground and surface waters.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### **Section 501.APPENDIX A References to Previous Rules**

The following table is provided to aid in referencing old Board rule numbers to

section numbers underpursuant to codification.

Chapter 5: Agriculture Related Pollution      35 Ill. Admin. Code 501

Part I, General Provisions

<del>Rule 101</del>	<del>Section 501.101</del>
Rule 102	Section 501.102
Rule 103	Section 501.201 <u>et seq.</u>
Rule 104(a)	Section 501.401
Rule 104(b)	Section 501.402
Rule 104(c)	Section 501.403
Rule 104(d)	Section 501.404
Rule 104(e)	Section 501.405
Rule 105	Section 502.305
Rule 106	Section 501.406

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

PART 502  
PERMITS

SUBPART A: PERMITS REQUIRED

Section	
502.101	NPDES Permit Requirement and Duty to Maintain Permit Coverage
502.102	Land Application Discharges and Agricultural Stormwater
502.103	Large CAFOs
502.104	Medium CAFOs
502.105	Small CAFOs
502.106	Case-By-Case Designation Requiring NPDES Permits

SUBPART B: PERMIT APPLICATIONS

Section	
502.201	Permit Applications
502.202	Permit Application Submissions
502.203	New Applications (Repealed)
502.204	Renewal
502.205	New Operations (Repealed)
502.206	Signatures
502.207	Disclosure Required for Land Trusts

SUBPART C: PERMIT ISSUANCE AND CONDITIONS

Section	
502.301	Standards for Issuance
502.302	Duration of Permits
502.303	New Source Standards
502.304	Issuance and Conditions
502.305	Agency Criteria
502.310	CAFOs Seeking Coverage Under NPDES General Permits
502.315	CAFO Permit Requirements
502.320	Recordkeeping Requirements
502.325	Annual Report

SUBPART D: APPEAL AND ENFORCEMENT

Section	
502.401	Appeals from Conditions in Permits
502.402	Defenses

502.403 Modification or Termination of Permits

SUBPART E: REQUIREMENTS FOR DEVELOPING AND  
IMPLEMENTING NUTRIENT MANAGEMENT PLANS

Section

502.500 Purpose, Scope and Applicability  
502.505 Nutrient Management Plan Information  
502.510 Nutrient Management Plan Requirements  
502.515 Terms of Nutrient Management Plan  
502.520 Changes to the Nutrient Management Plan

SUBPART F: LIVESTOCK WASTE DISCHARGE LIMITATIONS  
AND TECHNICAL STANDARDS

Section

502.600 Applicability  
502.605 Livestock Waste Discharge Limitations for the Production Area for Permitted  
CAFOs  
502.610 Additional Measures for CAFO Production Areas  
502.615 Nutrient Transport Potential  
502.620 Protocols to Land Apply Livestock Waste  
502.625 Determination of Livestock Waste Application Rates  
502.630 Protocols to Land Apply Livestock Waste During Winter  
502.635 Manure and Soil Sampling and Analysis  
502.640 Inspection of Land Application Equipment for Leaks  
502.645 Land Application Setback Requirements

SUBPART G: ADDITIONAL LIVESTOCK WASTE DISCHARGE LIMITATIONS

Section

502.710 New Source Performance Standards for Dairy Cows and Cattle Other Than Veal  
Calves  
502.720 Horse and Sheep CAFOs: BPT, BAT and NSPS  
502.730 Duck CAFOs: BPT and NSPS

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



## 502.APPENDIX A References to Previous Rules

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

SOURCE: Filed and effective January 1, 1978; amended at 2 Ill. Reg. 44, p. 137, effective October 30, 1978; codified at 7 Ill. Reg. 10594; amended in R12-23 at 38 Ill. Reg. 17687, effective August 11, 2014; amended in R18-25 at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

### SUBPART A: PERMITS REQUIRED

#### Section 502.101 NPDES Permit Requirement and Duty to Maintain Permit Coverage

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.102 Land Application Discharges and Agricultural Stormwater

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.103 Large CAFOs

An Animal Feeding Operation is defined as a Large CAFO if at least 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 <del>but is not limited to</del> 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 Animal Feeding Operation uses a liquid manure handling system
125,000	Chickens (other than laying hens), if the Animal Feeding Operation uses other than a liquid manure handling system
82,000	Laying hens, if the Animal Feeding Operation uses other than a liquid manure handling system

30,000	Ducks, if the Animal Feeding Operation uses other than a liquid manure handling system
5,000	Ducks, if the Animal Feeding Operation uses a liquid manure handling system

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 502.104 Medium CAFOs**

- a) An Animal Feeding Operation is defined as a Medium CAFO if the following numbers of animals specified in any of the following categories are stabled or confined and ~~the provisions of subsection (b), (c) or (d) 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 <del>but is not limited to</del> 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 Animal Feeding Operation uses a liquid manure handling system
37,500 to 124,999	Chickens (other than laying hens), if the Animal Feeding Operation uses other than a liquid manure handling system
25,000 to 81,999	Laying hens, if the Animal Feeding Operation uses other than a liquid manure handling system
10,000 to 29,999	Ducks, if the Animal Feeding Operation uses other than a liquid manure handling system
1,500 to 4,999	Ducks, if the Animal Feeding Operation uses a liquid manure handling system

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.105 Small CAFOs

An Animal Feeding Operation is a Small CAFO if the Agency designates it as a CAFO by the Agency ~~is designated as a CAFO by the Agency~~ under pursuant to Section 502.106, and it is not a Medium CAFO.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.106 Case-By-Case Designation Requiring NPDES Permits

- a) ~~Despite~~ Notwithstanding any other provision of this Part, the Agency may require any Animal Feeding Operation not falling within Section 502.103 or 502.104 to obtain an NPDES permit by designating the Animal Feeding Operation as a CAFO upon determining that it significantly contributes ~~is a significant contributor of pollutants to waters of the United States. In determining~~ making the determination of whether the Animal Feeding Operation significantly contributes ~~is a significant contributor of pollutants~~, the Agency must ~~shall~~ consider the following factors:
- 1) ~~The size of the~~ Animal Feeding Operation's size and the amount of livestock wastes reaching waters of the United States;
  - 2) ~~The location of the~~ Animal Feeding Operation's location relative to waters of the United States;
  - 3) The means to convey ~~of conveyance~~ of livestock wastes into waters of the United States;
  - 4) The slope, vegetation, rainfall and other factors relative to the likelihood or frequency of livestock discharge ~~of livestock waste~~ discharge into waters of the United States; and
  - 5) Other ~~such~~ factors signifying ~~bearing on the significance of the pollution problem sought to be regulated.~~
- b) The Agency, however, may not require a permit under subsection (a) for any Animal Feeding Operation with less than the number of animals stated ~~set forth~~ in Section 502.104, unless it meets either of the following conditions:
- 1) Pollutants are discharged into waters of the United States through a man-made ditch, flushing system or other similar man-made device; or
  - 2) Pollutants are discharged directly into waters of the United States that 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 ~~under~~ pursuant to this Section until the operation has been inspected and determined there has been an onsite inspection of the operation and a determination that the operation should and could be regulated under the permit program
- d) ~~Before~~ prior to designating an Animal Feeding Operation as a CAFO, the Agency ~~must~~ shall send the Animal Feeding Operation a written notice that it intends to designate the Animal Feeding Operation as a CAFO. The notice ~~must~~ shall include grounds for the designation and information regarding the opportunity to request a meeting with the Agency within 90 days after the Animal Feeding Operation's receipt of the notice to present evidence that it is not significantly contributing a significant contributor of pollutants to waters of the United States as provided in subsection (a). Beginning 90 days after the Animal Feeding Operation receives initial written notice ~~is received by the Animal Feeding Operation~~, the Agency may designate the Animal Feeding Operation as a CAFO. The Agency ~~must~~ shall send the Animal Feeding Operation a written notice of its ~~designation~~ decision and the grounds to designate ~~for the designation~~ in writing.
- e) Upon receipt of the Agency's ~~designation~~ decision to designate, the owner or operator ~~must~~ shall ~~make an~~ apply for a NPDES permit ~~with application~~ to the Agency within 90 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 to comply ~~compliance~~ with the Act and all applicable regulations ~~must~~ shall be achieved.
- f) The question of whether the designation was proper will remain open while the permit application is pending ~~during the pendency of the permit application~~. Any appeal of the Agency's designation decision must be made as part of an NPDES permit appeal.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## SUBPART B: PERMIT APPLICATIONS

### Section 502.201 Permit Applications

- a) All applications from a new or existing CAFO for any permit, including an individual permit or a general permit, required under this Chapter ~~must~~ 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);
- 5) A statement as to any projected changes in the ~~size of the~~ livestock operation's size and when they may occur during the term of the permit;
- 6) The type of containment and storage (anaerobic lagoon, roofed storage shed, storage ponds, underfloor pits, above ground storage tanks, below ground storage tanks, concrete pad, impervious soil pad, other) and total capacity for manure, litter, and process wastewater storage (in tons or gallons);
- 7) A topographic map of the geographic area in which the CAFO is located showing the specific location of the production area and land application areas, and indicating the following:
  - A) Direction and location of surface and subsurface drainage and other discharges from the facility; and
  - B) Location of waterways in the area.
- 8) Estimated amounts of livestock waste generated per year (in tons or gallons);
- 9) The total ~~acreage number of acres~~ number of acres of land application area and the estimated amount of waste to be applied to those acres per year;
- 10) Estimated amount of livestock waste transferred to other persons per year (in tons or gallons);
- 11) A nutrient management plan that is consistent with ~~the requirements of~~ Subpart E;
- 12) A stormwater pollution prevention plan;
- 13) A spill control and prevention plan; and
- 14) A statement identifying and justifying any departure from current design criteria the Agency promulgates ~~promulgated by the Agency~~.

- b) The Agency may adopt procedures requiring ~~such~~ additional information as is necessary to determine whether the CAFO will meet ~~the requirements of~~ the Act and applicable Board regulations.
- 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 ~~must~~ be submitted.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.202 Permit Application Submissions**

All permit applications ~~must~~ be mailed or delivered to Illinois Environmental Protection Agency, Bureau of Water, 1021 N. Grand Ave. E., Springfield IL 62794 or electronically submitted at CAFO@EPA.state.il.us.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.203 New Applications (Repealed)**

(Source: Repealed at 38 Ill. Reg. 17687, effective August 11, 2014)

### **Section 502.204 Renewal**

Permittees seeking reissuance of their NPDES permit ~~under pursuant to~~ Section 502.101(d) must apply for reissuance of the permit, using proper forms, ~~at least not less than~~ 180 days ~~before prior to~~ the ~~permit expiring. permit expiration date.~~ The Agency will notify those persons of the need for renewal at least 60 days ~~before 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 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.206 Signatures**

An application submitted by a corporation ~~must~~ be signed by a principal executive officer of at least the level of vice-president, or his duly authorized representative, if ~~that~~ ~~such~~ representative is responsible for ~~operating the overall operation of~~ the facility. In the case of a partnership or a sole proprietorship, the application must be signed by a general partner or the proprietor, respectively. In the case of a publicly-owned facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.207 Disclosure Required for Land Trusts**

An applicant filing for an NPDES permit ~~must~~ shall satisfy ~~the requirements of~~ the Land Trust Beneficial Interest Disclosure Act [735 ILCS 405 et. seq.] before the Agency grants the applicant its permit.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## SUBPART C: PERMIT ISSUANCE AND CONDITIONS

### Section 502.301 Standards for Issuance

The Agency ~~will~~ shall not grant any NPDES permit unless the applicant submits proof that the subject facility:

- a) Will be constructed, modified, or operated so as not to ~~violate~~ cause a violation of the Act or ~~of~~ applicable Board regulations or ~~of~~ the Federal Water Pollution Control Act (CWA) (12 U.S.C. 24), or has been granted a variance under Title IX of the Act; and
- b) Either conforms to the design criteria the Agency promulgates ~~promulgated by the Agency~~ under Section 502.305 or is based on ~~such~~ other criteria which the applicant proves will produce consistently satisfactory results.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.303 New Source Standards

~~Despite~~ ~~Notwithstanding~~ any other provision of this regulation, any point source, ~~the construction of,~~ which is commenced after the ~~enacting date~~ date of enactment, ~~constructing~~ of the CWA and ~~which is so constructed as~~ to meet the applicable federal "standard of performance" as defined in Section 306 of CWA ~~must~~ shall not be subject to any more stringent federal "standard of performance" during a ten-year period beginning on the date the construction is completed ~~of completion of such construction~~ or during the ~~period of~~ depreciation or amortization of ~~the~~ such facility for the purposes of Section 167 or 169 (or both) of the Internal Revenue Code of 1954, whichever period ends first (26 U.S.C. 167 and 169).

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.304 Issuance and Conditions

- a) ~~The provisions of~~ 35 Ill. Adm. Code 309: Subpart A ~~does not~~ shall apply to the issuance, conditions and modification of NPDES permits under this Chapter in the same manner as those provisions apply to NPDES permits issued under ~~pursuant to~~ 35 Ill. Adm. Code 309. Specific provisions applicable to CAFOs seeking coverage under NPDES general permits are found in Section 502.310.



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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.305 Agency Criteria**

- a) Unless otherwise provided for by Board regulations, the Agency may adopt procedures which ~~stateset forth~~ criteria for the design and maintenance of facilities subject to this chapter. These procedures ~~must~~shall be revised from time to time to reflect current engineering judgment and advances in the state of the art.
- b) Before adopting new criteria or making substantive changes in any criteria ~~the Agency adopts~~adopted by the Agency, the Agency ~~must~~shall publish a summary of the proposed changes in the Environmental Register and, at the Agency's expense, in a widely circulated agricultural periodical.
- c) In adopting new or revised criteria the Agency ~~must~~shall comply with ~~the requirements of~~ the Illinois Administrative Procedure Act, (Ill. Rev. Stat. 1981, ch. 127, par. 1001 et seq).

(Source: Amended at 45 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 to authorize ~~seeking authorization to~~ discharge under a general permit.
- b) When additional information is necessary to complete the notice of intent or to clarify, modify, or supplement previously submitted material, the Agency may request that information from the owner or operator as provided in 35 Ill. Adm. Code 309.106.
- c) The Agency must notify the public of its proposal to grant coverage under the general permit to the CAFO. This public notice must include the CAFO's nutrient management plan.
- d) The process for submitting public comments and hearing requests, and the hearing process if a request for a hearing is granted, will follow the procedures applicable to draft individual permits found in 35 Ill. Adm. Code 309.109(b) and 309.115 through 309.118.
- e) The time period for the public to comment and request a hearing is 30 days following the date of the notice issued ~~under~~pursuant to subsection (c).

- f) When a public hearing is held, the Agency must respond to significant comments received during the comment period as provided in 35 Ill. Adm. Code 309.119 and 309.120, except that notice and transmission to the USEPA Regional Administrator is not required. If no hearing is held, the Agency ~~must~~ 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 ~~must~~ shall become incorporated as terms and conditions of the permit for the CAFO. ~~Incorporating This incorporation~~ of terms and conditions does not require ~~modifying a modification~~ of the general permit.
- h) The Agency ~~must~~ shall notify the CAFO owner or operator and inform the public that coverage has been authorized and ~~that~~ the terms of the nutrient management plan incorporated as terms and conditions of the permit applicable to the CAFO.
- i) Nothing in this Section ~~must~~ shall limit the Agency's authority to require an individual NPDES permit ~~under pursuant to~~ Section 39(b) of the Act.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.315 CAFO Permit Requirements**

NPDES permits issued to CAFOs under this Part must include:

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

(Source: Amended at 45 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 ~~under~~pursuant to Section 502.510(b)(16);
- b) A copy of the information required under Section 502.201;
- c) Records documenting the visual inspections required under Section 502.610(c);
- d) Weekly records of the manure's depth of the manure and process wastewater in the liquid livestock waste storage as the depth marker indicates ~~indicated by the depth marker~~, as described in Section 502.610(d);
- e) Records documenting any actions taken to correct deficiencies as required by Sections 502.610(e) and (f). Deficiencies not corrected within 30 days must be accompanied by explanation of the factors preventing immediate correction;
- f) Records of mortalities management and practices the facility uses~~used by the facility~~ to meet the requirements of Section 502.610(g);
- g) Records documenting the current design of any livestock waste storage structures, including volume for solids accumulation, design treatment volume, total design volume, and approximate number of days of storage capacity;
- h) Records of the date, time, and estimated volume of any overflow;
- i) A copy of the facility's site-specific nutrient management plan;
- j) Expected crop yields for land application areas;
- k) The dates livestock waste is applied to each land application area;
- l) Records documenting subsurface drainage inspections conducted according to the plan developed ~~under~~pursuant to Section 502.510(b)(13);
- m) Results from livestock waste and soil sampling;
- n) Explanation of the basis for determining livestock waste application rates;
- o) Calculations showing the total nitrogen and phosphorus to be applied to each field, including sources other than livestock waste;
- p) Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied;

- q) The method used to apply the livestock waste;
- r) Date of livestock waste application equipment inspection;
- s) Maximum number and type of animals, whether in open confinement or housed under roof by the following types: beef cattle, broilers, layers, swine weighing 55 pounds or more, swine weighing less than 55 pounds, mature dairy cows, dairy heifers, veal calves, sheep and lambs, horses, turkeys, ducks, other;
- t) All records necessary to prepare the annual report required by Section 502.325;
- u) Total ~~acreage~~ ~~number of acres~~ of land application area the nutrient management plan covers ~~covered by the nutrient management plan~~;
- v) The quantity of livestock waste removed when a manure storage area or waste containment area is dewatered;
- w) The following information for each day during which livestock wastes are applied to land:
  - 1) the amount applied to each field in either gallons, wet tons or dry tons per acre;
  - 2) soil water conditions at the time of application (such as dry, saturated, flooded, frozen, snow-covered);
  - 3) an estimate of the precipitation amount of ~~precipitation~~ 24 hours before ~~prior to~~, and for 24 hours after, the application;
  - 4) the type of application method used (surface, surface with incorporation, or injection);
  - 5) the location of the field where livestock waste was applied;
  - 6) the results inspecting leaks in ~~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 the off-site recipient used ~~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 before ~~prior to~~ and for 24 hours following application; and

- 9) Records of the weather forecasts required to be maintained ~~under~~ pursuant to Sections 502.620(d) and 502.630(b)(3), (4), and (5);
- x) The laboratory analysis sheets reporting the analysis of the livestock waste samples ~~must~~ shall be kept on file at the facility for the ~~permit's~~ term of the permit and for 5 years after ~~the permit expires~~ expiration of the permit; and
- y) Records documenting the test methods and sampling protocols for manure, litter and process wastewater and soil analyses.

(Source: Amended at 45 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 ~~the facility generates~~ generated by the facility in the previous 12 months (tons/gallons);
  - 3) Quantity of livestock waste ~~the facility transfers~~ transferred to another person ~~by the facility~~ in the previous 12 months (in tons or gallons);
  - 4) Total ~~acreage number of acres~~ of land application area ~~the nutrient management plan covers~~ covered by the nutrient management plan;
  - 5) Total ~~acreage number of acres~~ the CAFO used for land application of livestock waste in the previous 12 months and were under the control of the CAFO through ownership, lease, or consent agreement;
  - 6) A statement indicating whether the current version of the CAFO's nutrient management plan for land application of livestock waste was developed or approved by a certified nutrient management planner and by whom ~~issued the certificate~~ the certification was issued;
  - 7) Summary of all livestock waste discharges from the production area that have occurred in the previous 12 months, including date, time, and approximate volume;

- 8) A report of instances of non-compliance with the NPDES permit in the previous 12 months;
- 9) The actual crops planted and actual yields for each field;
- 10) The actual nitrogen and phosphorus content of the livestock waste;
- 11) The results of calculations conducted to comply in accordance with Section 502.515(d)(3) and (e)(3);
- 12) The amount of livestock waste land applied to each field during the previous 12 months;
- 13) For any CAFO that implements a nutrient management plan that addresses application rates of application to comply in accordance with Section 502.515(e):
  - a) the results of any soil testing for nitrogen and phosphorus taken during the preceding 12 months;
  - b) data used to calculate in calculations conducted and comply in accordance with Section 502.515(e)(3), and
  - c) the amount of any supplemental fertilizer applied during the previous 12 months; and
- 14) Annual review of the nutrient management practices to be implemented and an update of the nutrient management plan when ~~there is a change in~~ the nutrient management practices change.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART D: APPEAL AND ENFORCEMENT

##### **Section 502.401 Appeals from Conditions in Permits**

An applicant may consider any condition ~~the Agency imposes imposed by the Agency~~ in a permit as the Agency refusing a refusal by the Agency to grant a permit. An applicant or others who have been a party or participant at an Agency hearing ~~are~~ shall be entitled to appeal the Agency's decision to the Board underpursuant to Section 40 of the Act, 35 Ill. Adm. Code 105 and 35 Ill. Adm. Code: Subtitle C, Chapter I.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

##### **Section 502.402 Defenses**

- a) ~~Issuing or possessing~~The issuance or possession of a permit does not allow the permittee to violate the Act or Board regulations and ~~is not~~does not constitute a defense to ~~such~~ a violation other than an alleged violation for construction or operation without a permit.
- b) ~~Complying~~Compliance with an NPDES permit ~~must~~shall be ~~considered~~deemed ~~compliant~~compliance for purposes of Sections 42, 43 and 44 of the Act (Penalties), with the Act and applicable regulations, to the extent that ~~complying~~ ~~such~~ ~~compliance~~ would be a defense to enforcement action under the CWA.
- c) Except for federally-imposed requirements ~~for~~with respect to NPDES permits, ~~complying~~compliance with the rules ~~the Board promulgates~~and regulations ~~promulgated by the Board~~ under the Act ~~must~~shall ~~be~~constitute a prima facie defense to any action, legal, equitable, or criminal, or an administrative proceeding ~~to violate~~for a violation of the Act, brought by any person.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.403 Modification or Termination of Permits**

The Board may, after petition and hearing ~~to comply in accordance~~ with the Act and its Procedural Rules, terminate any permit or modify it in any manner which is consistent with the Act and applicable Board regulations or federal requirements upon proof of cause, including ~~but not limited to~~, the following:

- a) ~~Violating~~Violation of any condition of the permit (including, ~~but not limited to~~, conditions concerning monitoring, entry and inspection);
- b) Obtaining a permit by misrepresentation or failure to disclose fully all relevant facts; or
- c) Change in any condition that requires either a temporary or permanent reduction or ~~eliminating~~elimination of the permitted discharge.

(Source: Amended at 45 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 ~~transporting~~transport of nitrogen and phosphorus to waters of the United States ~~to comply within compliance with~~ the nutrient management plan.

- a) The requirements in this Subpart apply to CAFOs required to obtain an NPDES permit. Unpermitted large CAFOs claiming an agricultural stormwater exemption

~~underpursuant to~~ Section 502.102 are not required to have a nutrient management plan but must comply with the requirements listed in Section 502.510(b) to qualify for the exemption.

- b) The CAFO owner or operator ~~must~~ shall develop, submit and implement a site specific nutrient management plan. This plan ~~must~~ shall specifically identify and describe practices that will be implemented to assure ~~it complies~~ compliance with this Subpart and the livestock waste discharge limitations and technical standards of Subparts F, G, and H.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.505 Nutrient Management Plan Information**

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

- a) Name, address, and phone number of the CAFO owners ~~of the CAFO~~;
- b) Name, address, and phone number of the managers or operators if different than the owners;
- c) Address, phone number, and plat location of the CAFO production area;
- d) Name of the person who developed the nutrient management plan and a statement indicating whether it was developed or approved by a certified nutrient management planner and by whom the certification was issued;
- e) Type of waste storage for the CAFO;
- f) Species, size and maximum number of animals at the CAFO;
- g) Scaled aerial photos or maps depicting each field available and intended for livestock waste applications with available acreage listed and indicating residences, non-farm businesses, common places of assembly, streams, wells, waterways, lakes, ponds, rivers, drainage ditches, subsurface drainage systems, other water sources, 10-year flood plain, buffers, slope, locations of structural Best Management Practices, setbacks and areas restricted from application by this Subpart E;
- h) For land application areas the owner or operator of the CAFO does not own or rent ~~not owned or rented by the owner or operator of the CAFO~~, copies of the consent statements of consent ~~of consent~~ between the livestock facilities' owner or operator ~~of the livestock facilities~~ and the landowner ~~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 livestock waste's nutrient value ~~of the livestock waste~~ or the results of livestock waste analysis determined under~~pursuant to~~ Section 502.625(c);
- l) Livestock waste application methods;
- m) Results of the Bray P1 or Mehlich 3 test for soil phosphorus, ~~in~~ compliance~~accordance~~ with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200, reported in pounds of elemental phosphorus per acre. If the livestock waste is to be land applied based on a single year or multi-year phosphorus application on the land application area, the following items must be provided:
  - 1) An estimate of the livestock waste's 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<sub>2</sub>O<sub>5</sub> per acre, obtained from the Illinois Agronomy Handbook, 24<sup>th</sup> Edition, incorporated by reference at 35 Ill. Adm. Code 501.200; and
  - 4) The maximum livestock waste application rate based on phosphorus for each field, determined under~~pursuant to~~ Section 502.625(g).
- n) Calculations showing the following:
  - 1) An estimate of the livestock waste's 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 mineralized ~~mineralization of~~ first-year organic nitrogen;
  - 6) Amount of nitrogen required by each crop in each field based on realistic crop yield goal;

- 7) Nitrogen credits from previous crops, from other sources of fertilizer applied for the growing season, and from any livestock waste applications during the previous three years for each field;
- 8) Livestock waste application rate based on nitrogen for each field; and
- 9) Land area required for application;
- o) A listing of fields and the planned livestock waste application amounts for each field.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.510 Nutrient Management Plan Requirements**

- a) Any permit issued to a CAFO must ~~require~~include a requirement to implementing a nutrient management plan by the date of permit coverage that, ~~at a minimum,~~ contains best management practices necessary to meet ~~the requirements of this~~ Section and the applicable livestock discharge limitations and technical standards in 35 Ill. Adm. Code 501 and 502.
- b) The nutrient management plan must specify and demonstrate:
  - 1) The livestock waste application rate of nitrogen in a single year and phosphorus in a single year or multiple years, not to exceed the single year crop nitrogen and single year or multi-year phosphorus requirements for realistic crop yield goals in the rotation;
  - 2) Adequate land application area for livestock waste application which may include:
    - A) land the CAFO owner or operator owns ~~owned by the CAFO owner or operator~~;
    - B) land the CAFO rents or leases ~~rented or leased by the CAFO~~;
    - C) land covered by a consent agreement between the CAFO owner or operator and the property owner; or
    - D) any combination of the land described in subsection (b)(2)(A) through (C);
  - 3) Adequate storage of livestock waste, including procedures to ensure operating and maintaining ~~proper operation and maintenance of the~~ storage facilities is proper;

- 4) Proper management of mortalities to ensure that they are not disposed of in a liquid livestock waste or stormwater storage or treatment system that is not specifically designed to treat animal mortalities;
- 5) That clean water is diverted, as appropriate, from the production area;
- 6) ~~Prevention of~~ That direct contact of confined animals with waters of the United States is prevented;
- 7) That chemicals and other contaminants handled on-site are not disposed of in any livestock waste or stormwater storage or treatment system unless specifically designed to treat those chemicals and other contaminants;
- 8) Appropriate site specific conservation practices to be implemented, including, as appropriate, buffers or equivalent practices, to control ~~pollutant~~ runoff of ~~pollutants~~ to waters of the United States;
- 9) Protocols for appropriate livestock waste and soil testing ~~of livestock waste and soil~~. Livestock waste must be analyzed at least a minimum of once annually for nitrogen and phosphorus content, and soil analyzed at least 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 application of livestock waste ~~in compliance~~ in accordance with site-specific nutrient management practices that ensure utilizing appropriate agricultural ~~utilization of the~~ nutrients in the livestock waste;
- 11) Livestock waste ~~must~~ shall not be applied within the distance from residences provided in Section 502.645(a) and within the areas prohibited from land application by this Part;
- 12) A winter time land application plan that meets ~~the requirements of~~ Section 502.630;
- 13) The plan ~~inspecting for the inspection~~, monitoring, management and repair of subsurface drainage systems at the livestock waste application site. ~~Inspection of~~ Inspecting subsurface drainage systems ~~must~~ shall include visual inspection ~~before~~ prior to land application to determine failures that may cause discharges and visual inspection during and after land application to identify discharges. For ~~purposes of~~ this subsection (b)(13), visual inspection means a person inspecting ~~inspection by a person of~~ the tile inlet, tile outlet and unobstructed land surface to assess the structural ability of the subsurface drainage system;
- 14) A spill prevention and control plan;

- 15) Annual review of the nutrient management practices to be implemented and an update of the nutrient management plan when ~~there is a change in~~ the nutrient management practices change;
- 16) Specific records that will be maintained to document ~~implementing the implementation and managing management~~ of the minimum elements described in subsections (b)(2) through (15); and
- 17) A description of the storage provisions and schedules provided for livestock waste when cropping practices, soil conditions, weather conditions or other conditions prevent applying ~~the application of~~ livestock waste to land or prevent other methods of livestock waste disposal.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.515 Terms of Nutrient Management Plan**

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

- a) The terms of the nutrient management plan are the information, protocols, best management practices, and other conditions in the nutrient management plan the Agency determines ~~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, regarding with respect to protocols for land application of livestock waste as required by Subpart F, must include:
  - 1) the fields available for land application;
  - 2) field-specific rates of application properly developed under pursuant to subsection (d) or (e) to ensure utilizing appropriate agricultural ~~utilization of the~~ nutrients in the livestock waste; and
  - 3) any timing limitations identified in the nutrient management plan concerning land application on the fields available for land application.
- c) The terms of the nutrient management plan must address rates of application using either the linear approach as described in subsection (d) or the narrative rate approach as described in subsection (e), unless the Agency specifies that only one of these approaches may be used.

- d) The linear approach is an approach that expresses application rates~~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 the~~the~~ certain factors necessary to determine those rates.
  - 2) ~~At a minimum,~~ the factors that are terms must include:
    - A) the outcome of assessing the field-specific ~~assessment of the~~ potential for nitrogen and phosphorus transport from each field;
    - B) the crops to be planted in each field or any other uses of a field such as pasture or fallow fields;
    - C) the realistic yield goal for each crop or use identified for each field;
    - D) the nitrogen and phosphorus recommendations, according to Section 502.625, for each crop or use identified for each field;
    - E) credits for all nitrogen in the field that will be plant available;
    - F) consideration of multi-year phosphorus application;
    - G) accounting for all other additions of plant available nitrogen and phosphorus to the field;
    - H) the form and source of livestock waste to be land-applied;
    - 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 before~~prior to~~ the date of land application required by Section 502.635.
- e) The narrative rate approach is an approach that expresses application rates~~rates of application~~ as a narrative rates of application~~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 ~~the~~certain factors necessary to determine those amounts;
  - B) the outcome of assessing 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~~ to comply ~~accordance~~ with subsection (e)(1)(G);
  - D) the realistic yield goal for each crop or use identified for each field;
  - E) the nitrogen and phosphorus recommendations according to Section 502.625 for each crop or use identified for each field;
  - F) the methodology by which the nutrient management plan accounts for the following factors when calculating the amounts of livestock waste to be land applied:
    - i) results of soil tests conducted to comply~~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) ~~volatizing~~volatilization of nitrogen and ~~mineralizing~~mineralization of organic nitrogen.
  - G) alternative crops identified in the CAFO's nutrient management plan that are not in the planned crop rotation.
    - i) When a CAFO includes alternative crops in its nutrient management plan, the crops must be listed by field, in addition to the crops identified in the planned crop rotation for that field, and the nutrient management plan must include realistic crop yield goals and the nitrogen and phosphorus recommendations according to Section 502.625 for each crop.
    - ii) Maximum amounts of nitrogen and phosphorus from all sources of nutrients and the amounts of livestock waste to be applied must be determined ~~in compliance~~accordance with the methodology described in subsections (e)(1)(A) through (F).
- 2) For CAFOs using this narrative approach, the following projections must be included in the nutrient management plan submitted to the Agency, but are not terms of the nutrient management plan:
  - A) the CAFO's planned crop rotations for each field for the period of permit coverage;
  - B) the projected amount of livestock waste to be applied;
  - C) projected credits for all nitrogen in the field that will be plant available;
  - D) consideration of multi-year phosphorus application;
  - E) accounting for all other additions of plant available nitrogen and phosphorus to the field;
  - F) the predicted form, source, and method of ~~applying~~application of livestock waste for each crop; and
  - G) timing of application for each field, insofar as it concerns ~~calculating the~~the calculation of rates of application.
- 3) CAFOs that use this narrative rate approach must calculate maximum amounts of livestock waste to be land applied at least once each year using

the methodology required in subsections (e)(1)(A) through (F) before land applying livestock waste and must rely on the following data:

- A) a field-specific determination of nitrogen that will be plant available consistent with the methodology required by subsections (e)(1)(A) through (F), and for phosphorus, the results of the most recent soil test conducted to comply in accordance with soil testing requirements the Agency approves ~~approved by the Agency~~; and
- B) the results of most recent representative livestock waste tests for nitrogen and phosphorus taken within 12 months ~~before~~prior to the date of land application, ~~in order~~ to determine the amount of nitrogen and phosphorus in the livestock waste to be applied.

(Source: Amended at 45 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 submitted to the Agency, the procedures in this Section are applicable.

- a) The CAFO owner or operator must identify changes to the nutrient management plan, except that the calculated results of calculations made in compliance~~accordance with the requirements~~ of Sections 502.515(d)(3) and (e)(3) are not subject to ~~the requirements~~ of this Section. These calculations may be revised without submittal to the Agency if 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 ~~that such~~ notification, the CAFO may implement the revised nutrient management plan.
  - 2) If revision to the terms of the nutrient management plan is necessary, the Agency must determine whether the changes are substantial changes as described in subsection (d).
  - 3) If the Agency determines that the changes to the terms of the nutrient management plan are not substantial, the Agency must notify the owner or operator and inform the public of any changes to the terms of the nutrient management plan that are incorporated into the permit.



- c) If the Agency determines that the changes to the terms of the nutrient management plan are substantial, the Agency must notify the public and make the proposed changes and the information the CAFO owner or operator submits ~~submitted by the CAFO owner or operator~~ available for public review and comment.
- 1) The process and time limits for submitting public comments and hearing requests, the hearing process if a request for a hearing is granted, and the process for responding to significant comments received during the comment period will follow the procedures applicable to draft general permits found in Section 502.310(d) through (f).
  - 2) The Agency will require the CAFO owner or operator to further revise the nutrient management plan, if necessary, ~~in order~~ to approve the revision to the terms of the nutrient management plan incorporated into the CAFO's permit.
  - 3) Once the Agency incorporates the revised terms of the nutrient management plan into the permit, the Agency must notify the owner or operator and inform the public of the final decision concerning the revisions to the terms and conditions of the permit.
- d) Substantial changes to the terms of the nutrient management plan incorporated as terms and conditions of a permit include, ~~but are not limited to:~~
- 1) ~~Adding~~ Addition of new land application areas not previously included in the CAFO's nutrient management plan; except that, if the land application area that is being added to the nutrient management plan is covered by the terms of a nutrient management plan incorporated into an existing NPDES permit ~~in compliance~~ ~~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 compliance~~ ~~accordance~~ with the existing field-specific permit terms applicable to the newly added land application area, ~~adding~~ addition of new land would be a change to the new CAFO owner's or operator's nutrient management plan but not a substantial change for ~~purposes~~ of this Section;
  - 2) For nutrient management plans using the linear approach ~~stated 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) ~~Adding~~ Addition of any crop or other uses not included in the terms of the CAFO's nutrient management plan and corresponding field-specific

~~application rates~~ ~~rates of application~~ expressed to comply in accordance with Section 502.515; and

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART F: LIVESTOCK WASTE DISCHARGE LIMITATIONS AND TECHNICAL STANDARDS

##### **Section 502.600 Applicability**

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

- a) Except as provided in subsections (a)(1), (a)(2) and (c), there must be no livestock waste discharge ~~of livestock wastes~~ into waters of the United States from the CAFO production area. Whenever precipitation causes an overflow of livestock wastes from the containment or storage structure, livestock wastes in the overflow may be discharged into waters of the United States if provided:
  - 1) The production area is designed, constructed, operated and maintained to contain all livestock wastes, including the runoff and the direct precipitation from a 25-year, 24-hour precipitation event, except that, for swine, poultry or veal, large CAFOs that are new sources must comply with Subpart H, and

- 2) The production area is operated ~~to comply 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 by the permit coverage date ~~as of the date of the permit coverage~~.
  - c) Voluntary Alternative Performance Standards. Any CAFO subject to this Subpart may request the Agency to establish NPDES permit livestock waste discharge limitations based upon site-specific alternative technologies that achieve a quantity of pollutants discharged from the production area equal to or less than the quantity of pollutants that would be discharged under the baseline performance standards as provided by subsection (a).
    - 1) In requesting site-specific livestock waste discharge limitations to be included in the NPDES permit, the CAFO owner or operator must submit a supporting technical analysis and any other relevant information and data that would support those site-specific livestock waste discharge limitations within the time frame the Agency provides ~~provided by the Agency~~.
    - 2) The supporting technical analysis must include ~~calculating~~ calculation of the quantity of pollutants discharged, on a mass basis when appropriate, based on a site-specific analysis of a system designed, constructed, operated, and maintained to contain all livestock waste, including the runoff from a 25-year, 24-hour rainfall event.
    - 3) The technical analysis of the discharge of pollutants must include:
      - A) all daily inputs to the storage system, including livestock waste, direct precipitation, and runoff;
      - B) all daily outputs from the storage system, including losses due to evaporation, sludge removal, and ~~removal of wastewater~~ removal 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<sub>5</sub> and total suspended solids, for the CAFO from representative sampling and ~~analyzing~~ analysis of all sources of input to the storage system, or other appropriate pollutant data; and

- E) predicted annual average ~~pollutant discharge~~ discharge of pollutants, expressed, when appropriate, as a mass discharge on a daily basis (lbs/day), and calculated considering subsections (c)(3)(A) through (D).
- 4) The Agency ~~may have the discretion to~~ request additional information to supplement the supporting technical analysis, including ~~inspecting~~ inspection of the CAFO.

(Source: Amended at 45 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 ~~must~~ shall not come into contact with waters of the United States.
- c) Visual Inspections. There must be routine visual inspections of the CAFO production area. ~~At a minimum, the~~ The following must occur:
  - 1) ~~Inspecting weekly~~ Weekly inspections of all stormwater diversion devices, runoff diversion structures, and devices channeling contaminated stormwater to the wastewater and manure storage and containment structure;
  - 2) ~~Inspecting~~ Daily inspection of water lines daily in the production areas, including drinking water or cooling water lines; and
  - 3) Weekly ~~inspecting~~ inspections of the livestock waste storage facilities. The inspection will note the ~~level~~ of total volume of materials in the liquid livestock waste storage facility using the depth marker required in subsection (d).
- d) Depth Marker. All open surface liquid livestock waste storage facilities must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation of the 25-year, 24-hour rainfall event. In the case of new sources subject to livestock waste discharge limitations established ~~under pursuant to~~ Section 502.830, all open surface livestock waste storage structures associated with the sources must include a depth marker that clearly indicates the minimum capacity necessary to contain the maximum runoff and direct precipitation associated with the design storm used in sizing the storage facility for no discharge.

- e) Corrective Actions. Any deficiencies found ~~because of~~ as a result of these inspections must be corrected as soon as possible.
- f) In addition to the requirement in subsection (e), deficiencies not corrected within 30 days must be accompanied by an explanation of the factors preventing immediate correction.
- g) Pollutant dDischarge to waters of the United States ~~of pollutants~~ from dead livestock or dead animal disposal facilities is prohibited. Dead livestock and water contaminated by dead livestock ~~must~~ shall not be disposed of in the liquid manure storage structures, egg wash wastewater facilities, egg processing wastewater facilities, or areas used to hold products, by-products or raw materials that are set aside for disposal, or contaminated stormwater facilities, other than facilities used solely ~~to dispose~~ for disposal of dead livestock.
- h) Chemicals and other contaminants ~~must~~ shall not be disposed of in any livestock waste or stormwater storage or treatment system unless specifically designed to treat those chemicals and other contaminants.
- i) A CAFO owner or operator utilizing an earthen lagoon or other earthen manure storage area or waste containment area ~~must~~ 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 ~~at least~~ of not less than once every week.
- j) The CAFO owner or operator ~~must~~ shall ~~periodically remove~~ perform periodic removal of livestock waste solids from liquid manure storage areas and the waste containment area to maintain ~~operating~~ proper operation of the storage structures properly. Soils that are contaminated with livestock waste removed from earthen manure storage structures ~~must~~ shall be considered livestock waste.
- k) Requirements Relating to Transfer of Livestock Waste to Other Persons.
  - 1) ~~Before~~ 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 ~~keep~~ retain for five years records of the date for five years, 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 ~~must~~ shall be designed to contain a volume equal to or greater than the ~~total 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 (1) 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 (1).

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.615 Nutrient Transport Potential**

- a) Field Assessment. An individual field assessment of the potential for nitrogen and phosphorus transport from the field to surface waters must be conducted and the results contained in the nutrient management plan. The following factors must be identified for each field to determine nitrogen and phosphorus transport potential to waters of the United States.
  - 1) Soil type;
  - 2) Slope;
  - 3) Conservation practices;
  - 4) Soil erodibility or potential for soil erosion;

- 5) Soil test phosphorus;
  - 6) Tile inlet locations;
  - 7) Distance to surface waters;
  - 8) Proximity to wells;
  - 9) Location of conduits to surface water, including preferential flow paths; and
  - 10) Subsurface drainage tiles.
- b) The applicant ~~must~~~~shall use~~ utilize the field assessment information obtained in subsection (a) to determine the appropriate phosphorus-based or nitrogen-based application rate for each assessed field. ~~Determining~~~~The determination of~~ phosphorus-based or nitrogen-based application of livestock waste on an assessed field must be consistent with subsection (c) or (d) and Sections 502.620, 502.625, 502.630, and 502.635.
- c) ~~Applying nitrogen-based application of~~ livestock waste must be conducted consistent with the following requirements:
- 1) livestock waste is applied consistent with the setback requirements in Section 502.645;
  - 2) available soil phosphorus (median Bray P1 or Mehlich 3 ~~in~~ ~~compliance~~~~accordance~~ with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200) is equal to or less than 300 pounds per acre;
  - 3) the soil loss calculated using the Revised Universal Soil Loss Equation 2 (RUSLE2) is less than the Erosion Factor T;

BOARD NOTE: Soil loss may be calculated using the Revised Universal Soil Loss Equation 2 (RUSLE 2) software program available at [http://fargo.nserl.purdue.edu/rusle2\\_dataweb/RUSLE2\\_Index.htm](http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm).

Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington DC 20250, (202) 720-3656. Erosion Factor T for Illinois soils is available from the United States Department of Agriculture, Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign IL 61821, (217) 353-6600. The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov>.

- 4) if conduits on the field are less than 400 feet from surface waters, the setback requirements in Section 502.645(b)(2) do not apply. Instead the following setbacks apply:
    - A) Livestock waste application ~~must~~ shall be conducted no closer than:
      - i) 150 feet from a tile inlet, agricultural well head, sinkhole, or edge of a ditch that has no vegetative buffer; or
      - ii) 50 feet from a tile inlet, agricultural well head, sinkhole, or edge of a ditch that has a 50 foot vegetative buffer or 50 feet from the center of a grass waterway;
    - B) These setbacks do not apply if the CAFO ~~demonstrates~~ is able to demonstrate to the Agency that a setback or buffer is not necessary because ~~implementing~~ implementation of alternative conservation practices (including; ~~but not limited to~~; injection and incorporation) or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions ~~that would be achieved by the 150-foot setback under subsection (c)(4)(A)(i) or the 50-foot setback under subsection (c)(4)(A)(ii)~~ achieves;
  - 5) if conduits on the field are more than 400 feet from surface waters, the setback requirements in subsection (c)(4) do not apply;
  - 6) where surface waters are on the assessed field or within 200 feet of the field, the livestock waste applied to the field ~~must~~ shall be injected or incorporated within 24 hours after the application or equivalent conservation practices must be installed and maintained on the field ~~under~~ pursuant to USDA-NRCS practice standards; and
  - 7) if nitrogen-based application cannot be conducted ~~to comply in accordance~~ with this subsection (c), then phosphorus-based application must be conducted as specified in subsection (d).
- d) Applying phosphorus-based application of livestock waste must be conducted consistent with the following requirements:
- 1) livestock waste must be applied consistent with the setback requirements in Section 502.645;
  - 2) the livestock waste application rate must not exceed the annual agronomic nitrogen demand of the next crop grown as provided in Section 502.625(a);



- 3) if the soil contains greater than 50 pounds of available soil phosphorus per acre (median Bray P1 or Mehlich 3 ~~in compliance~~accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), phosphorus-based application rates must maintain or lower the soil test phosphorus during the nutrient management plan period;
- 4) if the soil contains greater than 300 pounds of available soil phosphorus per acre (median Bray P1 or Mehlich 3 ~~in compliance~~accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200), the amount of phosphorus applied in the livestock waste must not exceed the amount of phosphorus ~~removed by the next year's crop grown and harvested~~ removes; and
- 5) livestock waste ~~must~~shall not be applied to fields with available soil phosphorus (median Bray P1 or Mehlich 3 ~~in compliance~~accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200) greater than 400 pounds per acre.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.620 Protocols to Land Apply Livestock Waste**

- a) Livestock wastes ~~must~~shall not be applied to of the United States. Livestock waste application ~~must~~shall not cause runoff to waters of the United States during non-precipitation events. Livestock waste application ~~must~~shall not occur on land that is saturated at the time of application. Livestock waste ~~must~~shall not be applied onto land with ponded water.
- b) Discharge of livestock waste to waters-of the United States or off-site during dry weather through subsurface drains is prohibited.
- c) Livestock waste ~~must~~shall not be applied during precipitation when runoff of livestock waste will be produced.
- d) Applying surface land application of livestock waste ~~must~~shall not occur within 24 hours preceding a precipitation forecast of 0.5 inches or more ~~of precipitation~~ in a 24-hour period as measured in liquid form. The CAFO owner or operator ~~must~~shall use one of the following two methods for determining whether these conditions exist and ~~must~~shall maintain a record of the forecast from the source used.
  - 1) A prediction of a 60 percent or greater chance of 0.5 inches or more of precipitation in a 24-hour period as measured in liquid form, obtained from the National Weather Service's Meteorological Development

Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910 for the location nearest to the land application area; or

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

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

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

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

BOARD NOTE: Soil loss may be calculated using the RUSLE2 software program available at [http://fargo.nserl.purdue.edu/rusle2\\_dataweb/RUSLE2\\_Index.htm](http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm). Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington DC 20250, (202) 720-3656.

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

BOARD NOTE: Soil loss may be calculated using the RUSLE2 software program available at [http://fargo.nserl.purdue.edu/rusle2\\_dataweb/RUSLE2\\_Index.htm](http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm). Additional information on RUSLE2 may be obtained from the United States Department of Agriculture, Agricultural Research Services, 1400 Independence Avenue, S.W., Washington DC 20250, (202) 720-3656. Erosion Factor T for Illinois soils is available from the United States Department of Agriculture, Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign IL 61821,

(217) 353-6600. The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov>.

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.625 Determination of Livestock Waste Application Rates**

- a) Livestock waste application ~~must~~ shall not exceed the agronomic nitrogen rate, which is defined as the annual application rate of nitrogen that can be expected to be required for a realistic crop yield goal. Multi-year phosphorus application is allowed when the application is specified in a nutrient management plan and meets the requirements in Section 502.615. Any ~~such~~ application must be consistent with nutrient management plan requirements. The agronomic rate must be determined in a manner consistent with this Section and Section 502.615.
- b) Livestock Waste Volumes. The annual volume estimate ~~of the annual volume~~ of available livestock waste for application ~~must~~ shall be obtained by multiplying the number of animals constituting the maximum design capacity of the facility by the appropriate amount of waste the animals generate ~~generated by the animals~~. For ~~purposes of~~ this Section, "maximum design capacity" means the maximum number of animals that can be housed at any time for a minimum of 45 days at a

CAFO. The following sources may be used to obtain the amount of waste generated:

- 1) Livestock Waste Facilities Handbook, Third Edition, Table 2-1, incorporated by reference at 35 Ill. Adm. Code 501.200(a);
  - 2) 35 Ill. Adm. Code 560. Table 1;
  - 3) Manure Characteristics, 2<sup>nd</sup> ed., 2004 (MWPS-18 Section 1), MidWest Plan Service, incorporated by reference at 35 Ill. Adm. Code 501.200(a); and
  - 4) NRCS Agricultural Waste Management Field Handbook Chapter 4, incorporated by reference at 35 Ill. Adm. Code 501.200(a).
- c) Nutrient Value of Livestock Waste. For new livestock facilities that have not generated livestock waste, the owner or operator must prepare a plan based on an average of the minimum and maximum numbers in the table values derived from Livestock Waste Facilities Handbook, Third Edition, Table 2-1, 10-6, or 10-7, or Manure Characteristics, incorporated by reference at 35 Ill. Adm. Code 501.200, or 35 Ill. Adm. Code 560. Table 1 or Table 2. If "as produced" or "as excreted" nutrient values are used, the nitrogen value ~~must~~shall be adjusted, to account for losses due to the type of storage system used, ~~utilized~~ using an average of the ranges in Livestock Waste Facilities Handbook, Third Edition, Table 10-1. Other sources of nutrient values may be used if ~~the Agency approves it~~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 ~~the CAFOs generate~~generated by the CAFOs in compliance ~~accordance~~ with Section 502.635(b).
- d) Adjustments to Nitrogen Availability. Adjustments ~~must~~shall be made to nitrogen availability to account for the following:
- 1) Nitrogen loss from livestock waste due to method of application, based on an average of the ranges in Livestock Waste Facilities Handbook, Third Edition, Table 10-2; and
  - 2) ~~Mineralizing~~The first-year mineralization of organic nitrogen into a plant available form, as obtained from Livestock Waste Facilities Handbook, Third Edition, Table 10-5.
- e) Realistic Crop Yield Goal
- 1) The realistic crop yield goal ~~must~~shall be determined for each field where the livestock waste is to be land applied. The realistic crop yield goal ~~must~~shall be determined using an average yield over a five-year period

from the field where livestock waste is to be land applied. The source of data ~~used to be utilized~~ to determine the realistic crop yield goal is provided in subsection (e)(2).

- 2) Whenever five years of data is available for the field where livestock waste is to be land applied, proven yields ~~must~~ shall be used in calculating the realistic crop yield, unless there is an agronomic basis for predicting a different realistic crop yield goal. The owner or operator ~~must~~ shall indicate the method used to determine the proven yield. Data from years with crop disasters may be discarded.
  - A) If five years of proven yield data is not available for the field where the livestock waste is to be land applied, or if an agronomic basis exists for predicting a different realistic crop yield goal, the owner or operator may calculate the realistic crop yield goal using crop insurance yields or Farm Service Agency USDA yields. If either of these sources is used, a copy of the insurance or assigned crop yields ~~must~~ shall be included with the nutrient management plan.
  - B) If data is not available on proven yields, crop insurance yields or Farm Service Agency yields, or if an agronomic basis exists for predicting a different realistic crop yield goal, soils based yield data from the University of Illinois "Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils; Bulletin No. 810" (Bulletin 810) or "Optimum Crop Productivity Ratings for Illinois Soils; Bulletin 811" (Bulletin 811), incorporated by reference at 35 Ill. Adm. Code 501.200, ~~the owner or operator must~~ shall ~~use~~ be used by the owner or operator to calculate the realistic crop yield goal ~~under pursuant to~~ subsection (e)(1).
    - i) If Bulletin 810 or 811 is used to calculate the realistic crop yield goal, a soil map of the land application areas ~~must~~ shall be included in the nutrient management plan.
    - ii) If Bulletin 810 or 811 is used, the realistic crop yield goal ~~must~~ shall be determined by a weighted average of the soil interpretation yield estimates for the fields where livestock waste is to be land applied.
    - iii) If Bulletin 811 is used, the owner or operator ~~must~~ shall demonstrate in the nutrient management plan that the operational management and field conditions of the facility and land application areas meet the requirements for optimum conditions as provided in Bulletin 811.

f) Nitrogen Credits

- 1) ~~The CAFO owner or operator must calculate n~~Nitrogen credits ~~shall be calculated by the CAFO owner or operator, under~~pursuant to Section 502.505(n)(7), for nitrogen-producing crops grown the previous year, for other sources of nitrogen applied for the growing season, and for mineralized organic nitrogen in livestock waste applied during the previous three years.
- 2) ~~The CAFO owner or operator must calculate n~~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 CAFO owner or operator must develop or amend 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 ~~must~~shall contain the following:

- 1) The phosphorus content of the livestock waste ~~must~~shall be determined ~~in compliance~~accordance with subsection (c);
- 2) The realistic crop yield goal of each crop in the field, obtained ~~under~~pursuant to subsection (e)(1);
- 3) The phosphorus amount needed for each crop in the planned crop rotation, expressed as P<sub>2</sub>O<sub>5</sub>, obtained from the Illinois Agronomy Handbook, 24<sup>th</sup> Edition, incorporated by reference at 35 Ill. Adm. Code 501.200. ~~The determination of this~~ Determining this phosphorus amount ~~must~~shall be based on the realistic crop yield goal for each planned crop and the soil test for available phosphorus (Bray P1 or Mehlich 3 ~~in compliance~~accordance with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200);
- 4) The phosphorus carryover from previous years' application of phosphorus or livestock waste;
- 5) Soil test phosphorus results for that field; and
- 6) The maximum livestock waste application rate, consistent with nitrogen-based or phosphorus-based applications allowed under Section 502.615.

- h) Nitrogen and phosphorus fertilization rates for the realistic crop yield goal may be obtained from the Illinois Agronomy Handbook, 24<sup>th</sup> Edition, incorporated by reference at 35 Ill. Adm. Code 501.200, or 35 Ill. Adm. Code 560. Appendix A.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.630 Protocols to Land Apply Livestock Waste During Winter**

- a) Winter Application Prohibition. Surface land application of livestock waste on frozen, ice-covered, or snow-covered ground is prohibited except as specified in subsection (a)(1).
- 1) ~~Despite~~Notwithstanding the winter application prohibition in subsection (a), surface land application of livestock waste on frozen, ice-covered or snow-covered ground is allowed if all of the following conditions are met:
- A) No practical alternative measures are available to handle the livestock waste within storage facilities or to dispose of the livestock waste at other sites. Examples of practical alternative measures may include, ~~but are not limited to~~, the transfer of waste to another waste handling facility or sewage treatment plant, rental or ~~acquiring~~acquisition of a storage tank, ~~reducing~~reduction of herd size or depopulation, and ~~protecting~~protection of the facility from direct precipitation and clean stormwater runoff;
  - B) Liquid livestock waste cannot be injected or incorporated within 24 hours after application due to soil conditions;
  - C) ~~Before~~prior to December 1, the owner or operator has taken steps to provide 120 days of available capacity for manure storage areas ~~storage capacity of manure storage areas~~. Examples of steps that could be taken may include, ~~but are not limited to~~, land application of livestock waste, transfer of waste to another party, protecting ~~protection of~~ waste storage structures from direct precipitation and stormwater runoff, and depopulating facilities to reduce the amount of waste generated;
  - D) The owner or operator has complied with subsection (a)(1)(C) and yet the storage volume available on December 1 of that winter season is less than 120 days of storage;
  - E) The owner or operator has notified the Agency in writing on December 1 of that winter season that the CAFO has less than 120 days storage available; and
  - F) The discharge of livestock waste from the structure to the surface waters is expected to occur due to shortage in storage capacity.

- 2) The storage volume calculation in subsection (a)(1)(C) must include runoff and direct precipitation plus the volume of livestock excreta, wash water and other process wastewater generated and expected to enter the storage structure during ~~the period of~~ December 1 to April 1. Runoff volume calculations must meet the following requirements:
  - A) Runoff calculations must be based on the runoff transferred into the storage structure under frozen ground conditions;
  - B) Direct precipitation that will reduce the available storage volume must be based on normal precipitation for the December 1 to April 1 period for the nearest weather station and, for facilities exposed to precipitation, the 25-year, 24-hour storm event volume or the design storm event volume determined under Subpart H for swine, poultry and veal large CAFOs that are new sources. ~~The determination of~~ Normal precipitation ~~determinations~~ must~~shall~~ be based on National Weather Service or State Water Survey Records;

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

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

- C) The owner or operator must~~shall~~ keep a record of the precipitation value used and the source from which the value was obtained; and
  - D) Calculations must allow for a freeboard of two feet.
- 3) ~~If in the event~~ winter land application is necessary, it must be conducted under~~pursuant to~~ a winter application plan described in subsection (b) and according to the conditions of subsection (c).

b) Winter Application Plan

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

- 1) No land application may occur within ¼ mile of a non-farm residence.
- 2) No discharge may occur during land application of livestock waste.



3) Surface land application on frozen ground ~~must~~ shall not occur within 24-hours preceding a precipitation forecast of 0.25 inches or more ~~of precipitation~~ in a 24-hour period as measured in liquid form. The CAFO owner or operator ~~must~~ shall use one of the following two methods for determining whether these conditions exist and ~~must~~ shall maintain a record of the forecast from the source used.

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

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

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

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

4) Surface land application of livestock waste on ice covered or snow covered land ~~must~~ shall not occur within 24 hours preceding a precipitation forecast of 0.1 inches or more ~~of precipitation~~ in a 24 hour period as measured in liquid form. The CAFO owner or operator ~~must~~ shall use one of the two methods provided below for determining whether or not these conditions exist and ~~must~~ shall maintain a record of the forecast from the source used.

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

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

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

BOARD NOTE: The prediction in subsection (b)(4)(B) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm>.

- 5) If the land application of livestock waste is on ice covered or snow covered land, surface land application ~~must~~shall not occur when the predicted high temperature exceeds 32 degrees F on the day of land application or on any of the 7 days following land application ~~as predicted by the National Weather Service's Meteorological Development Laboratory, Statistical Modeling Branch, 1325 East West Highway, Silver Spring MD 20910~~ predicts for the location nearest to the land application area. The owner or operator ~~must~~shall maintain a record of the forecast from the source used.

BOARD NOTE: The predicted high temperature in subsection (b)(5) may be obtained from the National Weather Service at <http://www.nws.noaa.gov/mdl/forecast/graphics/MEX/index.html> or <http://www.nws.noaa.gov/mdl/synop/products/bullform.mex.htm>.

- 6) If the surface land application of livestock waste is on ice covered or snow covered land, the CAFO owner or operator ~~must~~shall visually monitor for runoff from the site. The CAFO owner or operator daily must monitor each ice covered or snow covered field where land application has been conducted 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 ~~must~~shall report any discharge of livestock waste within 24 hours after the discovery of the discharge as follows:
- A) The report ~~must~~shall be made to the Agency through the Illinois Emergency Management Agency by calling 1-800-782-7860 or 1-217-782-7860;

B) Within 5 days after this telephone report, the CAFO owner or operator ~~must~~ shall file a written report with the Agency that includes the name and telephone number of the person filing the report, ~~the discharge's location, location of the discharge, an estimated estimate~~ of the quantity of the discharge, ~~the discharge's time and duration of the discharge,~~ actions taken in response to the discharge, and observations on the discharge's condition ~~of the condition of the discharge~~ with regards to run off turbidity, color, foaming, floatable solids and other deleterious conditions ~~of the runoff~~ for each day of the runoff event ~~of each runoff event~~ until the ice or snow melts off the site.

c) Availability of Individual Fields for Winter Application

If livestock waste is to be surface applied on frozen ground, ice covered land or snow covered land, the land application may only be conducted on land that meets the following requirements:

- 1) Adequate erosion and runoff control practices exist, including, ~~but not limited to,~~ vegetative fence rows around the site, contour farming, terracing, catchment basins and buffer areas that intercept surface runoff from the site;
- 2) A crop stubble, crop residue or vegetative buffer of 200 feet exists between the land application area and surface waters, waterways, open tile line intake structures, sinkholes, agricultural wellheads, or other conduits to surface water and the vegetative buffer zone is down gradient of the livestock waste application area;
- 3) Application on land with slopes greater than 5% is prohibited;
- 4) Application may only occur on sites that have field specific soil erosion loss calculated using Revised Universal Soil Loss Equation less than Erosion Factor T, and have a median Bray P1 or Mehlich 3 soil level of phosphorus, ~~in compliance~~ ~~in accordance~~ with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference in 35 Ill. Adm. Code 501.200, equal to or less than 300 pounds per acre;

BOARD NOTE: Soil loss may be calculated using the Revised Universal Soil Loss Equation 2 (RUSLE2) software program available at [http://fargo.nserl.purdue.edu/rusle2\\_dataweb/RUSLE2\\_Index.htm](http://fargo.nserl.purdue.edu/rusle2_dataweb/RUSLE2_Index.htm). Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington DC 20250, (202) 720-3656. Erosion Factor T for Illinois soils is available from the United States

Department of Agriculture, Natural Resources Conservation Service, Illinois Office, 2118 W. Park Court, Champaign IL 61821, (217) 353-6600. The published soil surveys for Illinois are available at <http://www.nrcs.usda.gov>.

- 5) Surface application may only occur if the setbacks equal three times the otherwise applicable setbacks by Sections 502.615 and 502.645 if the slope of the field is between 2 percent and 5 percent. This setback requirement does not include the quarter mile distance from residences contained in Section 502.645(a); and
- 6) For fields with slopes of less than 2 percent, the surface application may only occur if the setbacks equal two times the otherwise applicable setbacks required by Sections 502.615 and 502.645. This setback requirement does not include the quarter mile distance from residences contained in Section 502.645(a).

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.635 Manure and Soil Sampling and Analysis**

- a) Soil Phosphorus Sampling. Soil samples ~~must~~ shall be obtained and analyzed from each field of the land application area where applications are planned. Fields where livestock waste is applied ~~must~~ shall be sampled twice for each field during the ~~permit's term of the permit~~. Soil testing must be conducted as follows:
  - 1) Soil sampling for phosphorus ~~must~~ shall be ~~in compliance~~ ~~accordance~~ with the sampling protocols in Chapter 8 of the Illinois Agronomy Handbook, 24<sup>th</sup> Edition, incorporated by reference at 35 Ill. Adm. Code 501.200. Laboratory analysis for soil phosphorus (Bray P1 or Mehlich 3) ~~must~~ shall be ~~in compliance~~ ~~accordance~~ with Recommended Chemical Soil Test Procedures for the North Central Region, incorporated by reference at 35 Ill. Adm. Code 501.200;
  - 2) Soil samples ~~must~~ shall be at the same time in the cropping cycle and rotation so that results are comparable year to year; and
  - 3) The two required soil samples for each field must be taken at least one year apart.
- b) Manure Sampling.
  - 1) The CAFO owner or operator ~~must~~ shall annually obtain a laboratory analysis of the ~~livestock waste and its~~ nutrient content representative ~~of the livestock waste to be land applied as provided within the nutrient management plan~~. Livestock waste ~~must~~ shall be sampled during the application process. Multiple subsamples ~~must~~ 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 mustshall be used for ~~calculating calculation of~~ the application rate the NPDES permit allows ~~allowed by the NPDES permit~~.

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

(Source: Amended at 45 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 ~~applying application of~~ livestock waste on a routine basis.
- c) Calibration procedures and schedules mustshall be described for all equipment in the CAFO's nutrient management plan.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### **Section 502.645 Land Application Setback Requirements**

- a) Distance from Residences

Livestock waste mustshall not be land applied within ¼ mile of any residence not part of the CAFO, unless it is injected or incorporated on the day of application.

- b) Setbacks from Waters

- 1) Livestock waste mustshall not be land applied within 200 feet of surface water, unless the water is upgrade or there is adequate diking, which includes, ~~but is not limited to,~~ diking that prevents runoff from the land application from entering surface waters that are within 200 feet of the land application area.

- 2) Livestock waste ~~must~~ shall not be land applied within 100 feet of down gradient open subsurface drainage intakes, agricultural drainage wells, sinkholes, grassed waterways or other conduits to surface waters, unless a 35 foot vegetative buffer exists between the land application area and the grassed waterways, open subsurface drainage intakes, agricultural drainage wells, sinkholes or other conduits to surface water.
- 3) The setback requirements in subsection (b)(2) do not apply if the CAFO ~~demonstrates is able to demonstrate~~ to the Agency that a setback or buffer is not necessary because ~~implementing implementation of~~ alternative conservation practices (including, ~~but not limited to,~~ injection and incorporation) or field-specific conditions will provide pollutant reductions equivalent to or better than the reductions that ~~would be achieved by the~~ 100-foot setback would achieve.
- c) Livestock waste ~~must~~ shall not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.
- d) Livestock waste ~~must~~ shall not be land applied to waters of the United States, grassed waterways or other conduits to surface waters.
- e) Livestock waste ~~must~~ shall not be land applied within 150 feet of potable water supply wells.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART G: ADDITIONAL LIVESTOCK WASTE DISCHARGE LIMITATIONS

##### **Section 502.710 New Source Performance Standards for Dairy Cows and Cattle Other Than Veal Calves**

- a) New Source Performance Standards (NSPS) Applicability
 

Any CAFO with the capacity to stable or confine 700 or more mature dairy cows, whether milked or dry, or 1,000 or more cattle other than mature dairy cows or veal calves that is a new source must achieve the livestock waste discharge limitations representing NSPS' application date~~the application of NSPS as of the date~~ of permit coverage or within the timelines provided in Section 502.303.
- b) The livestock waste discharge limitations representing NSPS for the CAFO production area for CAFOs subject to this Section are the livestock waste discharge limitations found in Sections 502.605 and 502.610.
- c) The livestock waste discharge limitations representing NSPS for the CAFO land application area are the livestock waste discharge limitations and requirements found in Sections 502.615 through 502.645.

- d) CAFOs subject to this Section ~~must~~ shall attain the limitations ~~and requirements~~ in Subpart F as of the date of permit coverage or within the timelines provided in Section 502.303.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

This Section contains the effluent limitations applicable to discharges resulting from the production area at horse and sheep CAFOs. CAFOs subject to this Section ~~must~~ shall attain its limitations ~~and requirements of this Section as of the~~ at 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 ~~Applying the Application of~~ the Best Practicable Control Technology Currently Available (BPT) for Horse and Sheep CAFOs
- 1) Except as provided in subsection (a)(2), any existing point source subject to this Section ~~must~~ shall have no process wastewater pollutant discharge ~~of process wastewater pollutants~~ to waters of the United States. ~~Achieving Achievement of~~ no process wastewater discharge to waters of the United States is the effluent limitation representing applying the application of BPT for horse and sheep CAFOs.
  - 2) Process waste pollutants in the overflow may be discharge waters of the United States whenever rainfall events, either chronic or catastrophic, cause process waste water to 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's location~~.
- b) Effluent Limitations Attainable by ~~Applying the Application of~~ the Best Available Technology Economically Achievable (BAT) for Horse and Sheep CAFOs
- 1) Except when ~~the provisions of~~ subsection (b)(2) apply, any existing point source subject to this Section ~~must~~ shall not have no discharge of process wastewater pollutants to waters of the United States. ~~Achieving Achievement of~~ no process wastewater discharge to waters of the United States is the effluent limitation representing applying 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's location~~, any process

wastewater pollutants in the overflow may be discharged to waters of the United States.

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

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.730 Duck CAFOs: BPT and NSPS**

This Section contains the effluent limitations applicable to discharges resulting from the production areas at dry lot and wet lot duck CAFOs. CAFOs subject to this Section ~~must~~ 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 ~~Applying~~ 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 ~~must~~ shall achieve the following effluent limitations representing the degree of effluent reduction attainable by ~~applying~~ the application of BPT:

- 1) BOD<sub>5</sub> is limited to a maximum daily limit of 3.66 pounds/1,000 ducks or 1.66 kg/1,000 ducks.
- 2) BOD<sub>5</sub> is limited to a maximum monthly average of 2.0 pounds/1,000 ducks or 0.91 kg/1,000 ducks.
- 3) Fecal coliform is not to exceed the most probable number (MPN) of 400/100 ml at any time.

- b) New Source Performance Standards for Wet Lot and Dry Lot Duck CAFOs

- 1) Except as provided in subsection (b)(2), any new source subject to this Section ~~must~~ shall ~~not have no~~ discharge of process wastewater pollutants into waters of the United States. ~~Achieving~~ Achievement of no process wastewater discharge to waters of the United States is the performance standard representing NSPS for duck CAFOs.
- 2) Whenever rainfall events cause an overflow of process wastewater from a facility designed, constructed, operated and maintained to contain all



process-generated wastewaters plus the runoff from a 25-year, 24-hour rainfall event at the ~~location of the point source's location~~, any process wastewater pollutants in the overflow may be discharged to waters of the United States.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

### Section 502.800 Applicability

- a) This Subpart applies to all new swine, poultry and veal CAFOs with the capacity to stable or confine the total amount of specific animals ~~numbers of animals of the types~~ provided for in the definition of large CAFOs in Section 502.103.
- b) ~~The requirements of~~ This Subpart H are in addition to the livestock waste discharge limitations and technical standards in Subpart F, except Section 502.605.
- c) The limitations ~~and requirements~~ of this Subpart must be attained by NPDES' coverage date, as of the date of NPDES permit coverage or within the timelines provided in Section 502.303.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.820 Land Application Area Requirements

For CAFOs subject to this Subpart, the land application areas must ~~shall~~ attain the same limitations and requirements as specified in Sections 502.615 through 502.645.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### Section 502.830 Alternative Best Management Practice Livestock Waste Discharge Limitations

- a) Any CAFO subject to this Subpart may request that the Agency establish NPDES permit best management practice (BMP) livestock waste discharge limitations designed to ensure no ~~discharge of~~ livestock waste is discharged through ~~based upon~~ a site-specific evaluation of the CAFO's open surface livestock storage structure.
- b) The NPDES permit BMP livestock waste discharge limitations must address the CAFO's entire production area. In the case of any CAFO using an open surface livestock waste storage structure for which the Agency establishes ~~such~~ livestock waste discharge limitations, "no discharge of livestock waste pollutants," as used in this Subpart H, means that the storage structure is designed, operated, and

maintained ~~to comply in accordance~~ with BMP ~~established~~ by the Agency established 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: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 502.840 Technical Evaluation**

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

- a) Information to be used in the design of the open manure storage structure including, ~~but not limited to~~:
- 1) Minimum storage periods for rainy seasons;
  - 2) Additional minimum capacity for chronic rainfalls;
  - 3) Applicable technical standards that prohibit or otherwise limit land application on frozen, saturated or snow-covered ground found in Section 502.630;
  - 4) Planned emptying and dewatering schedules consistent with the CAFO's nutrient management plan;
  - 5) Additional storage capacity for livestock waste intended to be transferred to another recipient at a later time; and
  - 6) Any other factors that would affect the sizing of the structure.
- b) The design of the open livestock waste storage structure as determined ~~in~~ compliance ~~accordance~~ with 40 CFR 412.46(a)(1)(ii), incorporated by reference at 35 Ill. Adm. Code 501.200, or equivalent design software or procedures ~~approved~~ approved by the Agency approves.

BOARD NOTE: NRCS Animal Waste Management (AWM) software specified under 40 CFR 412.46(a)(1)(ii) is available at <http://www.nrcs.usda.gov>. Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington DC 20250, (202) 720-3656.

- c) All inputs used in the open livestock waste storage structure design, including:

- 1) actual climate data for the previous 30 years, consisting of historical average monthly precipitation and evaporation values;
  - 2) the number and types of animals;
  - 3) anticipated animal sizes or weights;
  - 4) any added water and bedding;
  - 5) any other process wastewater; and
  - 6) the size and condition of outside areas exposed to rainfall and contributing runoff to the open livestock waste storage structure.
- d) The planned minimum period of storage in months, including, ~~but not limited to,~~ the factors for designing an open livestock waste storage structure described in subsection (a). Alternatively the CAFO may determine the minimum period of storage by specifying times the storage pond will be emptied consistent with the CAFO's nutrient management plan.
- e) Site-specific predicted design specifications, including:
- 1) dimensions of the storage facility;
  - 2) daily manure and wastewater additions;
  - 3) the size and characteristics of the land application areas; and
  - 4) the total calculated storage period in months.
- f) ~~Evaluating~~ An evaluation of how adequate the adequacy of the designed manure storage structure to comply in accordance with 40 CFR 412.46(a)(1)(vi), incorporated by reference at 35 Ill. Adm. Code 501.200.
- 1) The evaluation must include all inputs used in the simulation, including ~~but not limited to:~~
    - A) daily precipitation, temperature, and evaporation data for the previous 100 years;
    - B) user-specified soil profiles representative of the CAFO's land application areas;
    - C) planned crop rotations consistent with the CAFO's nutrient management plan; and

- D) the final modeled result of no overflows from the designed open livestock waste storage structure.
- 2) For those CAFOs where 100 years of local weather data for the CAFO's location is not available, CAFOs may use a simulation with a confidence interval analysis conducted over a period of 100 years.
- 3) The adequacy of the designed manure storage structure may be evaluated using equivalent evaluation and simulation procedures ~~approved by the Agency~~ approved by the Agency.

BOARD NOTE: The Soil Plant Air Water (SPAW) Hydrology Tool specified at 40 CFR 412.46(a)(1)(vi) is available at <http://hydrolab.arsusda.gov/SPAW/Index.htm>. Additional information may be obtained from the United States Department of Agriculture, Agricultural Research Service, 1400 Independence Avenue, S.W., Washington DC 20250, (202) 720-3656.

- g) The Agency may waive the requirement in subsection (f) for a site-specific evaluation of the designed livestock waste storage structure and instead authorize a CAFO to use a technical evaluation developed for a class of specific facilities within a specified geographical area.
- h) The Agency may request additional information to support a request for livestock waste discharge limitations based on a site-specific open surface livestock waste storage structure.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 502.APPENDIX A References to Previous Rules**

The following table is provided to aid in referencing old Board rule numbers to sections numbers underpursuant to codification.

Chapter 5: Agriculture Related Pollution Part II, Permits	35 Ill. Admin. Code 502
Rule 201	Section 502.101
Rule 202	Section 502.102
Rule 202(a)	Section 502.103
Rule 202(b)	Section 502.104
Rule 202	Section 502.105
Rule 203	Section 502.106
Rule 204	Section 502.201
Rule 205	Section 502.202
Rule 206(a)	Section 502.203

Rule 206(b)	Section 502.204
Rule 207(a)	Section 502.205
Rule 207(b)	Section 502.206
Rule 207(c)	Section 502.207
Rule 208	Section 502.301
Rule 209(a)	Section 502.302
Rule 209(b)	Section 502.303
Rule 210	Section 502.304
Rule 105	Section 502.305
Rule 211	Section 502.401
Rule 212	Section 502.402
Rule 213	Section 502.403

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

PART 503  
OTHER AGRICULTURAL AND SILVICULTURAL ACTIVITIES

Section

- 503.101 Fish and Aquatic Animal Production Facilities  
503.102 Irrigation Activities  
503.103 Silvicultural Activities  
503.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 1/2, 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 in R18-25 at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

**Section 503.101 Fish and Aquatic Animal Production Facilities**

- a) National Pollutant Discharge Elimination System (NPDES) permits are required for the construction, modification, or operation of facilities such as hatcheries, fish farms or other facilities which contain, grow or hold aquatic animals in ponds, raceways or other similar structures for ~~purposes of production, that and from which there is or may be a~~ discharges for any 30 or more days per year, except that NPDES permits are not required for:
- 1) Closed ponds ~~that which~~ discharge only during periods of excess runoff; or
  - 2) Facilities which produce less than 20,000 pounds of aquatic animals per year.
- b) NPDES permits are required for any fish or aquatic animal facility which contains, grows, or holds any species of fish or other aquatic animal life non-native to the United States, ~~that from which there is a~~ discharges to a navigable water at any time. The non-native species of fish are as defined in Special Publication No. 6 of the American Fisheries Society, entitled "A List of Common and Scientific Names of Fishes from the United States and Canada" (Washington, D.C., American Fisheries Society, 1970); except that carp (*Cyprinum carpio*), goldfish (*Carassius auratus*) and brown trout (*Salmo trutta*) are considered ~~to be~~ native species for ~~purposes of~~ this regulation.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 503.APPENDIX A References to Previous Rules**

The following table is provided to aid in referencing old Board rule numbers to section numbers ~~underpursuant to~~ codification.

Chapter 5: Agriculture Related Pollution Part III, Other Agricultural and Silvicultural Activities	35 Ill. Admin. Code 503
Rule 301	Section 503.101
Rule 302	Section 503.102
Rule 303	Section 503.103

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

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

PART 506  
LIVESTOCK WASTE REGULATIONS

SUBPART A: GENERAL PROVISIONS

Section	
506.101	Applicability
506.102	Severability
506.103	Definitions
506.104	Incorporations by Reference
506.105	Recordkeeping (Repealed)
506.106	Alternatives, Modifications and Waivers

SUBPART B: STANDARDS FOR THE DESIGN AND CONSTRUCTION OF LIVESTOCK  
WASTE LAGOONS

Section	
506.201	Applicability
506.202	Site Investigation
506.203	Registration (Repealed)
506.204	Lagoon Design Standards
506.205	Liner Standards
506.206	Groundwater Monitoring
506.207	Construction in a Karst Area
506.208	Construction in a Flood Fringe Area
506.209	Lagoon Closure and Ownership Transfer (Repealed)
506.210	Secondary Containment

SUBPART C: STANDARDS FOR THE DESIGN AND CONSTRUCTION OF LIVESTOCK  
WASTE HANDLING FACILITIES OTHER THAN LAGOONS

Section	
506.301	Applicability
506.302	Site Investigation
506.303	Non-lagoon Livestock Waste Storage Volume Requirements
506.304	General Design and Construction Standards
506.305	Additional Concrete Design and Construction Standards
506.306	Additional Metal Design and Construction Standards
506.307	Additional Earthen Material Design and Construction Standards
506.308	Additional Synthetic Material Design and Construction Standards
506.309	Additional Wooden Material Design and Construction Standards



- 506.310 Additional Design and Construction Standards for Construction in an Area with Shallow Aquifer Material
- 506.311 Additional Design and Construction Standards for Construction in a Flood Fringe Area
- 506.312 Additional Design and Construction Standards for Construction in a Karst Area
- 506.313 Plan Updates (Repealed)
- 506.314 Penalties (Repealed)

#### SUBPART D: CERTIFIED LIVESTOCK MANAGER

- Section
- 506.401 Applicability (Repealed)

#### SUBPART E: PENALTIES

- Section
- 506.501 General (Repealed)

#### SUBPART F: FINANCIAL RESPONSIBILITY

- Section
- 506.601 Scope, Applicability, and Definitions (Repealed)
- 506.602 Mechanisms for Providing Evidence of Financial Responsibility (Repealed)
- 506.603 Level of Surety (Repealed)
- 506.604 Upgrading Surety Instrument (Repealed)
- 506.605 Release of Lagoon Owner and Financial Institution (Repealed)
- 506.606 Financial Responsibility Proceeds (Repealed)
- 506.607 Use of Multiple Surety Instruments (Repealed)
- 506.608 Use of a Single Surety Instrument for Multiple Lagoons (Repealed)
- 506.610 Commercial or Private Insurance (Repealed)
- 506.611 Guarantee (Repealed)
- 506.612 Surety Bond (Repealed)
- 506.613 Letter of Credit (Repealed)
- 506.614 Certificate of Deposit or Designated Savings Account (Repealed)
- 506.615 Participation in a Livestock Waste Lagoon Closure Fund (Repealed)
- 506.620 Penalties (Repealed)

#### SUBPART G: SETBACKS

- Section
- 506.701 Applicability (Repealed)
- 506.702 Procedures (Repealed)
- 506.703 Initial Determination of Setbacks (Repealed)
- 506.704 Penalties (Repealed)

506.APPENDIX A Surety Instruments (Repealed)

506.ILLUSTRATION A Surety Bond (Repealed)

506.ILLUSTRATION B Irrevocable Standby Letter of Credit (Repealed)

AUTHORITY: Authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/27] and Section 55 of the Livestock Management Facilities Act and implementing the Livestock Management Facilities Act [510 ILCS 77].

SOURCE: Adopted in R97-15(A) at 21 Ill. Reg. 6851, effective May 20, 1997; amended in R97-15(B) at 22 Ill. Reg.20605, effective November 12, 1998; amended in R01-28 at 25 Ill. Reg. 14883, effective November 15, 2001; amended in R18-25 at 45 Ill. Reg.\_\_\_\_\_, effective \_\_\_\_\_.

## SUBPART A: GENERAL PROVISIONS

### Section 506.101 Applicability

This Subpart applies to 35 Ill. Adm. Code 506. The applicability of Subpart B, Standards for the Design and Construction of Livestock Waste Lagoons, is ~~stated in set forth at~~ Section 506.201 ~~of this Part~~. The applicability of Subpart C, Standards for the Design and Construction of Livestock Waste Handling Facilities Other Than Lagoons, is ~~stated in set forth at~~ Section 506.301 ~~of this Part~~.

~~BOARD NOTE: Upon the effective date of this Part, the emergency rules at 35 Ill. Adm. Code 505, Livestock Waste Regulations, will no longer apply. This Part will take the place of those emergency rules. Additionally, the standards and specifications for the construction of livestock waste handling facilities contained in this Part shall be used in conjunction with the regulations at 8 Ill. Adm. Code 900.~~

(Source: Amended at 45 Ill. Reg.\_\_\_\_\_, effective \_\_\_\_\_)

### Section 506.103 Definitions

Except as stated in this Section, or unless a different meaning of a word or term is clear from the context, the definition of words or terms in this Part ~~must~~ shall be the same as that applied to the same words or terms in the Environmental Protection Act [415 ILCS 5] or the Livestock Management Facilities Act [510 ILCS 77]. For ~~the purposes of~~ this Part, the terms included in this Section ~~shall~~ have the following meanings:

*"Animal Feeding Operation" means a feeding operation as defined in the Illinois Environmental Protection Act and the rules promulgated under that Act concerning agriculture related pollution. [510 ILCS 77/10.7]*

*"Animal Unit" means a unit of measurement for any animal feeding operation calculated as follows:*

*Brood cows and slaughter and feeder cattle multiplied by 1.0.*

*Milking dairy cows multiplied by 1.4.*

*Young dairy stock multiplied by 0.6.*

*Swine weighing over 55 pounds multiplied by 0.4.*

*Swine weighing under 55 pounds multiplied by 0.03.*

*Sheep, lambs, or goats multiplied by 0.1.*

*Horses multiplied by 2.0.*

*Turkeys multiplied by 0.02.*

Laying hens or broilers multiplied by 0.005.

*Laying hens or broilers multiplied by 0.01 (if the facility has continuous overflow watering).*

*Laying hens or broilers multiplied by 0.03 (if the facility has a liquid manure handling system).*

*Ducks multiplied by 0.02. [510 ILCS 77/10.10]*

For species of animals in an animal feeding operation not specifically listed in this definition, the animal unit factor is ~~shall be~~ determined by dividing the average mature animal weight by 1,000. The Department must determine the average mature animal weight ~~The average mature animal weight shall be determined by the Department~~ with guidance from the University of Illinois Cooperative Extension Service.

"Aquifer material" means sandstone that is five feet or more in thickness, or fractured carbonate that is ten feet or more in thickness; or sand, gravel, or sand and gravel, as defined in this Section, such that there is at least two feet or more present within any five foot section of a soil boring performed in compliance ~~accordance~~ with Sections 506.202 and 506.302 of this Part.

*"Department" means the Illinois Department of Agriculture. [510 ILCS 77/10.20].*

"Filter Strip" means a strip or area of vegetation for removing sediment, organic material, organisms, nutrients, and chemicals from runoff or wastewater. A filter strip must be sized to process the amount of material expected to be released from the lagoon.

"Flood fringe" means that portion of the floodplain outside the floodway.

"Floodplain" means that land adjacent to a body of water with ground surface elevations at or below the 100-year frequency flood elevation.

"Floodway", for the six counties including Cook, DuPage, Kane, Lake, McHenry and Will, means *the channel and that portion of the floodplain adjacent to a stream or watercourse* as designated by the Illinois Department of Natural Resources ~~under~~<sup>pursuant</sup> to Section 18g of the Rivers, Lakes, and Streams Act [615 ILCS 5/18g], *which is needed to store and convey the anticipated future 100-year frequency flood discharge* with no more than a 0.1 foot increase in stage due to the loss of flood conveyance or storage, and no more than a 10% increase in velocities. [615 ILCS 5/18g(d)(1)] For the remaining 96 counties, "floodway" means the channel of a river, lake or stream and that portion of the adjacent land area that is needed to safely store and convey flood waters. Where floodways have been delineated for regulatory purposes, the mapped lines show the floodway encroachment limits and will be used. For other areas, floodway limits will be estimated, using hydrologic and hydraulic calculations, to preserve adequate conveyance and storage so that stage increases for the 100-year frequency flood would not exceed 0.1 foot.

"Grass Waterway" means a natural or constructed waterway, usually broad and shallow covered with erosion-resistant grasses, used to conduct surface water from or through a cropland. A grass waterway is used to convey any lagoon release to an area or structure where it would be contained, such as at an additional berm, or processed, such as at a filter strip, or conveyed to another area, such as by a terrace.

"Gravel" or "Sand and gravel" means unconsolidated materials that contain a matrix (particles of two millimeters or less) that is consistent with the definition of "sand" and particles larger than two millimeters in size.

*"Karst Area" means an area with a land surface containing sinkholes, large springs, disrupted land drainage, and underground drainage systems associated with karstified carbonate bedrock and caves or a land surface without these features but containing a karstified carbonate bedrock unit generally overlain by less than 60 feet of unconsolidated materials. [510 ILCS 77/10.24]*

*"Karstified Carbonate Bedrock" means a carbonate bedrock unit (limestone or dolomite) that has a pronounced conduit or secondary porosity due to dissolution of the rock along joints, fractures, or bedding plains. [510 ILCS 77/10.26]*

*"Lagoon" or "earthen livestock waste lagoon" means any excavated, diked, or walled structure or combination of structures designed for biological stabilization and storage of livestock wastes. A lagoon does not include structures such as manufactured slurry storage structures or pits under buildings as defined in rules under the Environmental Protection Act concerning agriculture related pollution. [510 ILCS 77/10.25]*

*"Licensed Professional Engineer" means a person, corporation or partnership licensed under the laws of the State of Illinois to practice professional engineering. [415 ILCS 5/57.2]*

*"Licensed Professional Geologist" means an individual who is licensed under the laws of the State of Illinois to engage in the practice of professional geology in Illinois. [225 ILCS 745/15]*

*"Livestock Management Facility" means any animal feeding operation, livestock shelter, or on-farm milking and accompanying milk-handling area. Two or more livestock management facilities under common ownership, where the facilities are not separated by a minimum distance of 1/4 mile, and that share a common livestock waste handling facility shall be considered a single livestock management facility. Livestock management facilities at educational institutions, livestock pasture operations, facilities where animals are housed on a temporary basis such as county and state fairs, livestock shows, race tracks, and horse breeding and foaling farms, and market holding facilities are not subject to the Livestock Management Facilities Act or the requirements of this Part. [510 ILCS 77/10.30]*

*"Livestock shelter" means any covered structure, including ~~but not limited to~~ livestock houses or barns, in which livestock are enclosed at any time.*

*"Livestock Waste" means livestock excreta and associated losses, bedding, wash waters, sprinkling waters from livestock cooling, precipitation polluted by falling on or flowing onto an animal feeding operation, and other materials polluted by livestock. [510 ILCS 77/10.35]*

*"Livestock Waste Handling Facility" means individually or collectively those immovable constructions or devices, except sewers, used for collecting, pumping, treating, or disposing of livestock waste or for the recovery of by-products from the livestock waste. Two or more livestock waste handling facilities under common ownership and where the facilities are not separated by a minimum distance of 1/4 mile shall be considered a single livestock waste handling facility. [510 ILCS 77/10.40] The Livestock Management Facilities Act and this Part do not apply to: livestock waste handling facilities at educational institutions; livestock pasture operations; or facilities where animals are housed on a temporary basis, such as county and State fairs, livestock shows, race tracks, horse breeding and foaling farms, and market holding facilities.*

*"Maintained" means, with reference to a livestock waste lagoon, that the livestock waste lagoon is inspected (including ~~but not limited to~~ inspection for burrow holes, trees and woody vegetation, proper freeboard, erosion, settling of berm, berm top integrity, leaks, and seepage) and preventive action is taken as necessary to assure the integrity of the lagoon and its berm and associated appurtenances.*

*"Modified" means structural changes to a lagoon that increase its volumetric capacity.*  
[510 ILCS 77/10.43]

*"New Facility" means a livestock management facility or a livestock waste handling facility the construction or expansion of which is commenced on or after May 1924, 1996 (the effective date of the Livestock Management Facilities Act). Expanding a facility where the fixed capital cost of the new components constructed within a 2-year period does not exceed 50% of the fixed capital cost of a comparable entirely new facility shall not be deemed a new facility as used in the Livestock Management Facilities Act. [510 ILCS 77/10.45] For facilities that have ~~stopped~~~~ceased~~ operation ~~on or after July 1243,~~ 1999, ~~starting~~~~commencement~~ of operations at a facility that has livestock shelters left intact and that has completed the requirements imposed under Section 13(k) of the Livestock Management Facilities Act [510 ILCS 77/13(k)] and 8 Ill. Adm. Code 900.508 [510 ILCS 77/13(k)] For facilities that have ~~stopped~~~~ceased~~ operation ~~before~~~~prior to~~ July 13, 1999, ~~starting~~~~commencement~~ of operations at a facility that has livestock shelters left intact and that has been operated as a livestock management facility or livestock waste handling facility for 4 consecutive months at any time within the previous 10 years ~~is~~~~shall~~ not be considered a new or expanded livestock management or waste handling facility.*

*"Owner or Operator" means any person who owns, leases, controls, or supervises a livestock management facility or livestock waste-handling facility. [510 ILCS 77/10.50]*

*"Person" means any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, political subdivision, state agency, or any other legal entity or their legal representative, agent, or assigns. [510 ILCS 77/10.55]*

*"Placed in service" means the placement of livestock waste in a livestock waste handling facility once the ~~upon the completion of~~ construction or modification is completed in compliance~~accordance~~ with ~~the requirements of~~ this Part.*

*"Sand" means unconsolidated materials, where 70% or more of the particles are of size 0.06 millimeters to 2.00 millimeters, and which, according to the USDA soil texture classification scheme, includes soil textures of sand, and loamy sand, and portions of sandy loam and sandy clay loam.*

*"Seasonal high water table" means the highest level of the water table encountered on a yearly basis, where water table is the surface on which the fluid pressure in the soil pore space is equal to the atmospheric pressure. The location of the water table is determined by the level at which water stands in a shallow well open along its length and penetrating the surficial deposits just deeply enough to encounter standing water in the bottom.*

*"Terrace" means an embankment or combination of embankment and channel constructed across a slope to control erosion by diverting and temporarily storing surface runoff instead of permitting it to flow uninterrupted down the slope. A terrace may be*

used to convey the released material to a grass waterway, a filter strip, or a secondary berm.

"USDA-NRCS" means the United States Department of Agriculture's Natural Resources Conservation Service.

"Void" means an underground opening generally produced by dissolution of rock in a karst area.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.106 Alternatives, Modifications and Waivers**

- a) All requests for alternatives, modifications, and waivers to this Part, where allowed by Sections 13(e) and 15(a) of the Act [510 ILCS 77/13(e),15(a)] or this Part ~~must~~ shall be made in writing to the Department. Construction ~~must~~ may not begin or continue until the request for alternative, modification, or waiver is granted.
- b) Each request for an alternative, modification, or waiver ~~must~~ shall contain a certification from a Licensed Professional Engineer or Licensed Professional Geologist, as relevant, that the grant of the modification is at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as the stated requirements or that the alternative or waiver is at least as protective as the stated requirements.
- c) The Department ~~must~~ shall notify the applicant in writing of its determination within 30 days after receipt of the request for an alternative, modification, or waiver. To grant the requested alternative, modification, or waiver, the Department must determine that the modification is at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as the stated requirements or that the alternative or waiver is at least as protective as the stated requirements.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **SUBPART B: STANDARDS FOR THE DESIGN AND CONSTRUCTION OF LIVESTOCK WASTE LAGOONS**

#### **Section 506.201 Applicability**

This Subpart ~~must~~ shall apply to any new or modified lagoon, that the Department has not approved the design for before November 15, 2001. ~~the design of which has not been approved by the Department prior to November 15, 2001.~~ The standards and specifications for livestock waste lagoon construction contained in this Subpart ~~must~~ shall be ~~used~~ utilized in the design plans

and construction of the lagoon in ~~compliance~~accordance with the registration of lagoons required in 8 Ill. Adm. Code 900.Subpart F.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.202 Site Investigation**

- a) The owner or operator of a lagoon constructed ~~under~~pursuant to this Subpart ~~must~~shall conduct a site investigation in ~~compliance~~accordance with ~~the requirements of~~ this Section to determine the following:
- 1) Whether aquifer material is considered present (or not present) within 50 feet of the planned bottom of the lagoon;
  - 2) Whether the proposed lagoon is to be located within the floodway or flood fringe of a 100-year floodplain; and
  - 3) Whether the proposed lagoon is to be located within a karst area or within 400 feet of a natural depression in a karst area.
- b) The owner or operator ~~must~~shall perform one or more soil borings that ~~must~~shall be located within the final lagoon area or within 20 feet of the final exterior berm toe. The boring ~~must~~shall be performed to determine the presence of aquifer material or karstified carbonate bedrock as follows:
- 1) The soil boring ~~must~~shall extend to a depth that includes 50 feet below the planned bottom of lagoon native soil or to bedrock;
  - 2) If bedrock is encountered, additional soil borings may be necessary to verify the presence of aquifer material or karstified carbonate bedrock;
  - 3) Continuous samples ~~must~~shall be recovered from each soil boring; and
  - 4) Upon completion, the borings~~(s)~~ ~~must~~shall be properly abandoned and sealed ~~under~~pursuant to the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120.
- c) If the Department determines that additional soil borings are necessary to ensure the protection of the groundwater, surface water or the structural integrity of the livestock waste management facility, the Department ~~must~~shall require additional soil borings.
- d) As an alternative to performing the soil borings~~(s)~~ required under subsection (b) or (c) ~~of this Section~~, the owner or operator of the lagoon may propose to the Department to ~~use~~utilize alternative information sources~~(s)~~. The Department



~~must~~shall evaluate the proposal; determine whether the alternative information sources~~(s)~~ will result in a site investigation that will be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as would have resulted from data resulting from soil borings; and notify the owner or operator of the Department's finding.

- e) ~~Despite Notwithstanding~~ the other requirements of this Subpart, if the site investigation determines that the lagoon is to be located in the flood fringe of a 100-year floodplain, the design of the lagoon ~~must~~shall ~~comply with~~include the ~~additional requirements of Section 506.206 of this Subpart.~~
- f) If the results of the soil boring conducted ~~underpursuant to~~ Section 506.202(b) of ~~this Subpart~~ indicate the proposed lagoon is to be located in a karst area or if the proposed lagoon is to be located within an area designated as "Sink hole areas" on "Karst Terrains and Carbonate Rocks of Illinois", IDNR-ISGS Illinois Map 8, the following requirements ~~must~~shall be met:
- 1) The Department ~~must~~shall conduct a visual inspection of the surrounding area to determine the presence of natural depressions during the pre-construction site inspection as required ~~underpursuant to~~ 8 Ill. Adm. Code 900.604(a). Construction ~~must~~may not occur within 400 feet of a natural depression in a karst area; and
  - 2) The Licensed Professional Engineer or Licensed Professional Geologist ~~must~~shall evaluate the results of the soil boring conducted ~~underpursuant to~~ subsection (b) of ~~this Section~~. If, ~~because as a result~~ of the soil boring, a void of 1 foot or greater in vertical distance is discovered, the following requirements ~~must~~shall be met:
    - A) The Department may require additional borings to determine the extent of the void;
    - B) ~~Despite Notwithstanding~~ the other requirements of this Subpart, the owner or operator ~~must~~shall submit to the Department a plan for the design of the lagoon that ~~must~~shall include the additional design requirements ~~stated set forth~~ in Section 506.207 of ~~this Part~~ and ~~must~~shall include any additional design requirements ~~deemed~~ necessary by the Licensed Professional Engineer; and
    - C) The Department ~~must~~shall review and approve the plan required ~~underpursuant to~~ subsection (f)(2)(B) of ~~this Section~~ ~~before~~prior to construction. The Department may also require additional design criteria before the plan is approved and construction may begin.

If, ~~because as a result~~ of the soil boring, no voids of 1 foot or greater in vertical distance are discovered, the design ~~must~~ shall include the additional requirements as ~~stated set forth~~ in Section 506.207 ~~of this Subpart~~.

- g) The site investigation in ~~compliance~~ accordance with subsection (b), (c), (d), (e), or (f) ~~of this Section~~ shall be conducted under the direction of a Licensed Professional Engineer or Licensed Professional Geologist.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.204 Lagoon Design Standards**

- a) The owner or operator of *any livestock waste lagoon subject to this Subpart shall construct or modify the lagoon in accordance with:*
- 1) *"Design of anaerobic lagoons for animal waste management", ASAE Engineering Practice 403.2; or the guidelines published by the United States Department of Agriculture's Natural Resource Conservation Service titled "Waste Treatment Lagoon", which are incorporated by reference in Section 506.104 ~~of this Part~~; and*
  - 2) *The additional design standards specified in subsections (c) through (h) ~~of this Section~~. [510 ILCS 77/15(a)]*
- b) *The department may require changes in design or additional requirements to protect groundwater, such as extra liner depth or synthetic liners, when it appears groundwater could be impacted. [510 ILCS 77/15(a)]*
- c) The owner or operator ~~must~~ shall conduct a site investigation in ~~compliance~~ accordance with Section 506.202 ~~of this Part~~ to determine if aquifer material is present (or not present) within 50 feet of the planned bottom of the lagoon.
- d) The owner or operator ~~must~~ shall, as a part of the lagoon design, include the use of a liner and implement groundwater monitoring in ~~compliance~~ accordance with following conditions:
- 1) If the uppermost aquifer material is located above or within 20 feet of the lowest point of the planned lagoon bottom (as measured from the top of any proposed liner), then the lagoon design ~~must~~ shall include both a liner and groundwater monitoring.
  - 2) If the uppermost aquifer material is located between 20 to 50 feet from the lowest point of the planned lagoon (as measured from the top of any proposed liner), then the lagoon design ~~must~~ shall include a liner, but no groundwater monitoring is required.

- 3) If no aquifer material is located within 50 feet from the lowest point of the planned lagoon (as measured from the top of any proposed liner), then the lagoon design ~~must not~~ shall require ~~neither~~ a liner nor groundwater monitoring.
- e) If the owner or operator determines that a liner is required for the lagoon ~~under~~ pursuant to this Section, the design of the lagoon ~~must~~ shall include an in-situ soil liner, borrowed clay or clay/bentonite mixture, or a synthetic liner in compliance with ~~meeting the requirements of~~ Section 506.205 of this Part.
- f) If the owner or operator determines that groundwater monitoring is required for the lagoon ~~under~~ pursuant to this Section, the design of the lagoon ~~must~~ shall implement ~~include the implementation of~~ a groundwater monitoring program in compliance ~~accordance with~~ Section 506.206 of this Part and 8 Ill. Adm. Code 900.Subpart F.
- g) Any livestock waste lagoon subject to ~~the provisions of~~ this Part ~~must~~ shall meet or exceed the following:
  - 1) Berm:
    - A) The minimum bermtop width ~~must~~ shall be 8 feet;
    - B) The berm may contain no outlet piping that extends through the berm unless the piping discharges to another lagoon or is a component of a recirculating flush system;
  - 2) Berm slope:
    - A) Exterior and normally exposed interior (above the liquid level elevation corresponding to the summation of the sludge volumes and minimum design volume) earthen walls ~~must~~ shall have side slopes not steeper than a 3 to 1 ratio of horizontal to vertical and a vegetative cover ~~must~~ shall be established on any exposed berm areas and kept mowed or otherwise maintained to eliminate erosion or other berm deterioration;
    - B) Interior berm earthen walls below the liquid level elevation corresponding to the summation of the sludge volumes and minimum design volume ~~must~~ shall have side slopes not steeper than a 3 to 1 ratio of horizontal to vertical; or a 2 to 1 ratio of horizontal to vertical if designed by a Licensed Professional Engineer and maintained to eliminate berm deterioration;

- 3) The lagoon's total design volume ~~must~~ shall be ~~at least~~ not less than the volume calculated as the summation of the following:
  - A) A minimum design volume, as calculated ~~under~~ pursuant to subsection 5.4.1.1, ASAE EP403.2, ASAE Standards 1998, pp. 656-659;
  - B) A livestock waste volume, that ~~must~~ shall be sufficient to store the waste generated by the facility for ~~a period of at least~~ not less than 270 days as determined in ~~compliance~~ accordance with ASAE EP403.2, ASAE Standards 1998, p. 656;
  - C) Runoff and wash down volumes generated during a 270-day period, including all runoff and precipitation from lots, roofs or other surfaces where collected precipitation is directed into the lagoon, plus the volume of any wash down liquids ~~used~~ utilized within the facility that are also directed into the lagoon. In no case ~~must~~ shall this volume be less than the precipitation and runoff generated by a 25-year, 24-hour storm event and directed to the lagoon; and
  - D) A sludge accumulation volume, as calculated ~~under~~ pursuant to subsection 5.4.1.4, ASAE EP403.2, ASAE Standards 1998, p. 658;
- 4) In addition to the lagoon's total design volume, a freeboard ~~must~~ shall be provided as follows:
  - A) For lagoons serving a livestock management facility with a maximum design capacity of less than 300 animal units and not collecting runoff from areas other than the exposed surface of the lagoon (including associated interior berm slopes and flat bermtop areas), the top of the settled embankment ~~must~~ shall be ~~at least~~ not less than 1 foot above the fluid surface level of the lagoon total design volume; or
  - B) For all other lagoons, the top of the settled embankment ~~must~~ shall be ~~at least~~ not less than 2 feet above the fluid surface level of the lagoon total design volume;
- 5) Subsurface drainage lines in the immediate area of the livestock waste lagoon ~~must~~ shall be removed or relocated to provide for a minimum separation distance of ~~at least~~ not less than 50 feet between the outermost extent of the lagoon (exterior toe of the berm) and the subsurface drainage line;

- 6) The minimum separation distance between the outermost extent of a lagoon (exterior toe of the berm) and any potential route of groundwater contamination, as defined in the Illinois Environmental Protection Act [415 ILCS 5] ~~must~~ shall be ~~at least not less than~~ 100 feet. In addition, the minimum separation distance between the outermost extent of a lagoon (exterior toe of the berm) and a non-potable well, an abandoned or plugged well, drainage well or injection well ~~must~~ shall be ~~at least not less than~~ 100 feet;
- 7) The design and construction of the lagoon ~~must~~ shall include the installation of a lagoon liquid level board or staff gauge within the interior of the liquid storage volume. The liquid level board or staff gauge ~~must~~ shall include a mark at the liquid level elevation corresponding to the summation of the sludge volume and minimum design volume and ~~must~~ shall be designated as the "STOP PUMPING" elevation. The liquid level board or staff gauge ~~must~~ shall also be marked at the liquid level elevation corresponding to the summation of the sludge volume, minimum design volume, runoff and wash down volumes, and livestock waste volume and ~~must~~ shall be designated as the "Start Pumping" "~~START PUMPING~~" elevation;
- 8) *The livestock waste supply to a single-stage lagoon must be below the minimum design volume level [510 ILCS 77/25(b)(2)]; and*
- 9) The location of the lagoon and the associated livestock management facility ~~must~~ shall ~~comply~~ be in compliance with all setback provisions of the Illinois Environmental Protection Act [415 ILCS 5], the Livestock Management Facilities Act [510 ILCS 77], and the rules promulgated thereunder.
- h) *The owner or operator of the earthen livestock lagoon may, upon written request and with written approval from the Department, modify or exceed these standards in order to meet site specific objectives. [510 ILCS 77/15(a)]* The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility ~~in compliance with the requirements of this Part.~~

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## Section 506.205 Liner Standards

- a) The design of a liner constructed from in-situ soils, borrowed clay or a clay/bentonite mixture, or a synthetic liner ~~underpursuant to Section 506.204(d) of this Part~~ must~~shall~~ comply with ~~the requirements of this Section.~~
- b) A liner constructed using in-situ soil or borrowed clay or clay/bentonite mixtures must~~shall~~ meet the following standards:
- 1) The minimum liner thickness must~~shall~~ be 2 feet;
  - 2) The liner must~~shall~~ be constructed in lifts not to exceed 6 inches in compacted thickness;
  - 3) The liner must~~shall~~ be compacted to achieve a hydraulic conductivity equal to or less than  $1 \times 10^{-7}$  centimeters/second; and
  - 4) The construction and compaction of the liner must~~shall~~ be carried out to reduce void spaces and allow the liner to support the loadings imposed by the waste disposal operation without settling.
- c) Any synthetic liner used in the construction of a livestock waste lagoon must~~shall~~ meet the following standards:
- 1) The liner must~~shall~~ be designed to perform equivalent to or better than a liner that conforms to subsection (b) ~~of this Section;~~
  - 2) The liner manufacturer must~~shall~~ provide to the owner or operator the liner maintenance guidelines and must~~shall~~ certify that the liner is chemically compatible with:
    - A) The livestock waste being stored; and
    - B) The supporting soil materials;
  - 3) The liner must~~shall~~ be supported by a compacted base free from sharp objects;
  - 4) The liner must~~shall~~ have sufficient strength and durability to function at the site for the design period under the maximum expected loadings imposed by the waste and equipment and stresses imposed by settlement, temperature, construction and operation;
  - 5) The liner seams must~~shall~~ be made in the field according to the manufacturer's specifications. All sections must~~shall~~ be arranged so that the use of field seams is minimized and seams are oriented in the direction subject to the least amount of stress; and

- 6) The owner or operator ~~must~~ shall maintain a copy of the manufacturer's compatibility statement and liner installation and maintenance guidelines at the facility.
- d) The design, construction and installation of the liner in ~~compliance~~ accordance with this Section ~~must~~ shall be conducted under the direction of a Licensed Professional Engineer. Upon completion of construction or installation of the liner, the supervising Licensed Professional Engineer ~~must~~ shall certify, ~~under~~ pursuant to 8 Ill. Adm. Code 900.605(a), that the liner ~~complies with~~ meets all the applicable requirements of this Section. Such certification ~~must~~ shall include all supporting justification and data.
- e) The owner or operator of a livestock waste lagoon ~~must~~ shall submit to the Department a copy of the Licensed Professional Engineer's Certification ~~before~~ prior to placing the lagoon in service in ~~compliance~~ accordance with 8 Ill. Adm. Code 900.605.
- f) *The owner or operator of the earthen livestock lagoon may, upon written request and with written approval from the Department, modify or exceed these standards in order to meet site specific objectives. [510 ILCS 77/15(a)]* The owner or operator shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility ~~in compliance with~~ as the requirements of this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.206 Groundwater Monitoring**

- a) The owner or operator of any livestock waste lagoon required to ~~use~~ implement groundwater monitoring ~~under~~ pursuant to Section 506.204(d) of this Part ~~must~~ shall implement a monitoring program that ~~complies with~~ meets the requirements of this Section and 8 Ill. Adm. Code 900.Subpart F.
- b) The groundwater monitoring network must consist of ~~at least a minimum~~ of three monitoring wells located within 20 feet of the exterior toe of the berm. At least two of the required wells must be located down gradient of the lagoon based on local groundwater conditions. For ~~the purposes of~~ groundwater monitoring network design, multiple cell lagoons must be considered as a single lagoon.
- c) The monitoring wells ~~must~~ shall be installed in ~~compliance~~ accordance with the following:
- 1) The requirements of the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.170;

- 2) The top of the well screen ~~must~~ shall be set at the estimated seasonal low water table elevation;
  - 3) Monitoring wells ~~must~~ shall ~~use~~ utilize a minimum of a five foot screened interval; and
  - 4) The screen ~~must~~ shall be set in a sand pack that extends at least one foot above and one foot below the screened interval.
- d) The owner or operator ~~must~~ shall sample the wells, analyze the samples, and report the results in ~~compliance~~ accordance with ~~the requirements of~~ 8 Ill. Adm. Code 900.Subpart F.
  - e) *The owner or operator of the earthen livestock lagoon may, upon written request and with written approval from the department, modify or exceed these standards in order to meet site specific objectives. [510 ILCS 77/15(a)]* The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility in compliance with ~~the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.207 Construction in a Karst Area**

- a) *A new earthen livestock waste lagoon constructed in a karst area shall be designed to prevent seepage of the stored material to groundwater. Owners or operators of proposed facilities shall consult with the local soil and water conservation district, the University of Illinois cooperative extension service, or other local, county, or state resources relative to determining the possible presence or absence of such areas. [510 ILCS 77/15/(a-5)(2)]*
- b) Any lagoon subject to ~~the provisions of~~ this Subpart, constructed in a karst area, ~~must~~ shall be designed and constructed utilizing a rigid material such as concrete or steel.
- c) The owner or operator of the earthen livestock lagoon may, upon written request and with written approval from the Department, modify or exceed the standards of this Section ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility in compliance with ~~the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)



## Section 506.208 Construction in a Flood Fringe Area

*A new earthen livestock waste lagoon may be constructed within the portion of a 100-year floodplain that is within the flood fringe and outside the floodway provided that the facility is designed and constructed so that livestock waste is not readily removed during flooding and meets the requirements set forth in the Rivers, Lakes, and Streams Act [615 ILCS 5], Section 5-40001 of the Counties Code [55 ILCS 5/5-40001], and executive order number 4 (1979). [510 ILCS 77/15(a-5)(1)]* The following criteria ~~must~~shall be incorporated into the design of a lagoon proposed for construction in the flood fringe of a 100-year floodplain:

- a) The lagoon berms ~~must~~shall be designed and constructed to withstand the hydrostatic pressures from flood waters that may be exerted on the berms during a flood event.
- b) The elevation of the lowest point on the bermtop ~~must~~shall be at the summation of the elevation of the 100-year flood plus a freeboard. The freeboard height ~~must~~shall be a minimum of two feet.
- c) For lagoons with unequal length and width dimensions, the lagoon ~~must~~shall be oriented with the longest dimension parallel to the expected direction of floodwater flow.
- d) Any monitoring wells installed ~~under~~pursuant to Section 506.206 of this Subpart ~~must~~shall be mounted flush with the surrounding soil surface or otherwise physically protected from the flood waters.
- e) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~shall demonstrate that such modification ~~must~~shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility ~~in compliance with the requirements of this Part.~~

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

## Section 506.210 Secondary Containment

*Notwithstanding any other requirement of this subpart or 8 Ill. Adm. Code 900, every earthen livestock waste lagoon constructed pursuant to this subpart shall include the construction of a secondary berm, filter strip, grass waterway, or terrace, or any combination of those, outside the perimeter of the primary berm if an engineer licensed under the Professional Engineering Practice Act of 1989 and retained by the registrant determines, with the concurrence of the department, that construction of such a secondary berm or other feature or features is necessary in order to ensure against a release of livestock waste from the lagoon that encroaches or is*

*reasonably expected to encroach upon land other than the land occupied by the livestock waste handling facility of which the lagoon is a part; or that enters or is reasonably expected to enter the waters of this state; or that enters or may reasonably be expected to enter a natural depression in a karst area and ~~must~~ shall be so designed. [510 ILCS 77/15(a)] The following criteria ~~must~~ shall be incorporated into the design of a system ~~used~~ utilized for secondary containment:*

- a) A grass waterway constructed, installed, or ~~used~~ utilized for the purposes of this Section ~~must~~ shall meet or exceed the following:
  - 1) A grass waterway ~~must~~ shall be designed and constructed to transfer the maximum expected flow rate of livestock waste that may reasonably be expected to be released from the lagoon;
  - 2) A grass waterway ~~must~~ shall direct the flow of livestock waste away from the lagoon berm to a filter strip, secondary berm, terrace, or combination of these; and
  - 3) Vegetation ~~must~~ shall be established and maintained to provide adequate ground cover.
  
- b) A filter strip constructed, installed, or ~~used~~ utilized for the purposes of this Section ~~must~~ shall meet or exceed the following:
  - 1) A filter strip ~~must~~ shall be designed and constructed to function at the maximum expected hydraulic loadings that may reasonably be expected to come from the lagoon; and
  - 2) Vegetation ~~must~~ shall be established and maintained to provide adequate ground cover.
  
- c) A secondary berm constructed, installed, or ~~used~~ utilized for the purposes of this Section ~~must~~ shall meet or exceed the following:
  - 1) The storage volume created ~~due to as a result of~~ the construction of a secondary berm ~~must~~ shall be of sufficient capacity to contain the portion of the lagoon liquid that may reasonably be expected to be released from the lagoon plus any accumulated precipitation; and
  - 2) A vegetative cover ~~must~~ shall be established. The area ~~must~~ shall be maintained by periodic mowing, the removal of woody plant species, or other measures to prevent erosion and berm deterioration.
  
- d) A terrace constructed, installed, or ~~used~~ utilized for the purposes of this Section ~~must~~ shall meet or exceed the following:

- 1) The terrace ~~must~~ shall direct the livestock waste to a filter strip or grass waterway constructed or installed ~~under~~ pursuant to the requirements of this Section; and
  - 2) Vegetation ~~must~~ shall be established and maintained to provide adequate ground cover on those portions of the terrace where crops are not grown.
- e) The owner or operator of the earthen livestock lagoon may, upon written request and with written approval from the Department, modify or exceed the standards of this Section ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility ~~in compliance with the requirements of this Part.~~

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### SUBPART C: STANDARDS FOR THE DESIGN AND CONSTRUCTION OF LIVESTOCK WASTE HANDLING FACILITIES OTHER THAN LAGOONS

##### **Section 506.301 Applicability**

The applicability of this Subpart ~~must~~ shall be as follows:

- a) Sections 506.302, 506.310, 506.311, and 506.312 of this Subpart ~~shall apply~~ to the newly constructed livestock waste handling components of new livestock waste handling facilities, other than livestock waste lagoons, that the Department has not approved the design for before November 15, 2001. the design of which has not been approved by the Department prior November 15, 2001.
- b) Sections 506.303, 506.304, 506.305, 506.306, 506.307, 506.308, and 506.309 ~~of this Subpart~~ shall ~~apply~~ to the newly constructed livestock waste handling components of new or existing livestock waste handling facilities, other than livestock waste lagoons, that the Department has not approved the design for before November 15, 2001. the design of which has not been approved by the Department prior to November 15, 2001.

The standards and specifications for livestock waste handling facility design and construction contained in this Subpart ~~must~~ shall be ~~used~~ utilized in the design plans and construction of the waste handling facility in compliance ~~accordance~~ with ~~the requirements of 8 Ill. Adm. Code 900.Subpart E.~~

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

##### **Section 506.302 Site Investigation**

- a) The owner or operator of a livestock waste handling facility ~~must~~ shall conduct a site investigation in ~~compliance~~ accordance with ~~the requirements of this Section~~ to determine the following:
- 1) Whether aquifer material is considered present (or not present) within 5 feet of the planned bottom of the livestock waste handling facility;
  - 2) Whether the proposed facility is to be located within the floodway or flood fringe of a 100-year floodplain; and
  - 3) Whether the proposed facility is to be located within a karst area or within 400 feet of a natural depression in a karst area.
- b) Except for facilities that are proposed to be located within an area designated as "Sink hole areas" on "Karst Terrains and Carbonate Rocks of Illinois", IDNR-ISGS Illinois Map 8, the owner or operator ~~must~~ shall obtain soil samples from within the final livestock waste handling facility area or within 20 feet of the livestock waste handling facility boundaries. The sampling ~~must~~ shall be performed to determine the presence of aquifer material or karstified carbonate bedrock as follows:
- 1) The soil sampling ~~must~~ shall begin at the soil surface and extend to a depth that includes a minimum of 5 feet below the planned bottom of the livestock waste handling facility native soil or to bedrock;
  - 2) If bedrock is encountered, additional soil samplings may be necessary to verify the presence of aquifer material or karstified carbonate bedrock;
  - 3) Continuous samples ~~must~~ shall be recovered from each soil sampling; and
  - 4) Upon completion, any boring used for sampling ~~must~~ shall be properly abandoned and sealed ~~under~~ pursuant to the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120. Any excavation used for sampling that is within the construction boundaries of the livestock management facility or livestock waste handling facility ~~must~~ shall be restored by ~~adding~~ the addition of soil compacted in lifts no greater than 6 inches.
- c) If the Department determines that additional soil samplings are necessary to ensure the protection of the groundwater, surface water or the structural integrity of the livestock waste handling facility, the Department ~~must~~ shall require additional soil samplings.
- d) As an alternative to performing the soil sampling required under subsection (b) or (c) ~~of this Section~~, the owner or operator of the livestock waste handling facility

may propose to the Department to ~~use~~utilize alternative information sources~~(s)~~. The Department ~~must~~shall evaluate the proposal; determine whether the alternative information sources~~(s)~~ will result in a site investigation that will be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste handling facility as would have resulted from data resulting from soil borings; and notify the owner or operator of the Department's finding.

- e) ~~Despite~~Notwithstanding the other requirements of this Subpart, if aquifer material is located above or within 5 feet of the lowest point of the livestock waste handling facility, the design of the facility ~~must~~shall comply with~~include the additional requirements of Section 506.310 of this Subpart.~~
- f) ~~Despite~~Notwithstanding the other requirements of this Subpart, if the site investigation determines that the livestock waste handling facility is to be located in the flood fringe of a 100-year floodplain, the design of the facility ~~must~~shall comply with~~include the additional requirements of Section 506.311 of this Subpart.~~
- g) If the proposed livestock waste handling facility is to be located within an area designated as "Sink hole areas" on "Karst Terrains and Carbonate Rocks of Illinois", IDNR-ISGS Illinois Map 8 or if the results of the soil sampling conducted ~~under~~pursuant to Section 506.302(b) of this Subpart indicate the proposed livestock waste handling facility is to be located in a karst area, the following requirements ~~must~~shall be met:
  - 1) The Department ~~must~~shall conduct a visual inspection of the surrounding area to determine the presence of natural depressions during the pre-construction site inspection as required ~~under~~pursuant to 8 Ill. Adm. Code 900.505(a). Construction ~~must~~may not occur within 400 feet of a natural depression in a karst area;
  - 2) The owner or operator ~~must~~shall perform one or more soil borings that ~~must~~shall be located within the final livestock waste handling facility area or within 20 feet of the livestock waste handling facility boundaries to determine the presence of voids. The boring ~~must~~shall begin at the soil surface and extend to a depth that includes a minimum of 20 feet below the planned bottom of the livestock waste handling facility;
  - 3) Continuous samples ~~must~~shall be recovered from each boring;
  - 4) The Licensed Professional Engineer, Licensed Professional Geologist, or USDA-NRCS representative designated to perform such functions ~~must~~shall evaluate the results of the soil boring. If a void of 1 foot or greater in vertical distance is discovered from the soil boring performed

~~underpursuant to subsection (g)(2) of this Section,~~ the following requirements ~~must~~ shall be met:

- A) The Department may require additional borings to determine the extent of the void;
- B) ~~Despite~~ ~~Notwithstanding~~ the other requirements of this Subpart, the owner or operator ~~must~~ shall submit to the Department a plan for the design of the facility that ~~must~~ shall include the additional design requirements ~~set forth~~ in Section 506.312 ~~of this Part~~ and ~~must~~ shall include any additional design requirements ~~deemed~~ necessary by the Licensed Professional Engineer; and
- C) The Department ~~must~~ shall review and approve the plan required ~~underpursuant to subsection (g)(4)(B) of this Section~~ ~~before~~ prior to construction. The Department may also require additional design criteria before the plan is approved and construction may begin.

If, ~~because as a result~~ of the soil boring, no voids of 1 foot or greater in vertical distance are discovered, the design ~~must~~ shall include the additional requirements ~~set forth~~ in Section 506.312 ~~of this Subpart~~.

- 5) Upon completion of the borings(s) required ~~underpursuant to subsection (g) of this Section,~~ the borings(s) ~~must~~ shall be properly abandoned and sealed ~~underpursuant to~~ the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120.
- h) The site investigation in ~~compliance~~ ~~accordance~~ with subsections (b), (c), (d), (e), (f), and (g) ~~of this Section~~ ~~must~~ shall be conducted under the direction of a Licensed Professional Engineer, a Licensed Professional Geologist, or a representative of the USDA-NRCS designated to perform such functions.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.303 Non-lagoon Livestock Waste Storage Volume Requirements**

- a) Livestock waste handling facilities *that handle waste in a liquid or semi-solid form shall be designed to contain a volume of not less than the amount of waste generated during 150 days of facility operation at design capacity.* [510 ILCS 77/13(a)(1)(B)] In addition, the design and volume of livestock waste storage structures that handle waste in a liquid or semi-solid form ~~must~~ shall include the following:
  - 1) Runoff volumes generated during a 150-day period, including all runoff and precipitation from lots, roofs and other surfaces where precipitation is directed into the storage structure. In no case ~~must~~ shall this volume be

less than the precipitation and runoff generated by a 25-year, 24-hour storm event and directed to the livestock waste handling facility;

- 2) The volume of all wash down liquid generated during the 150-day period that is directed into the livestock waste handling facility; and
  - 3) A freeboard of 2 feet, except for structures with a cover or otherwise protected from precipitation.
- b) Livestock waste handling facilities that handle waste in a solid form *shall be sized to store not less than the amount of waste generated during 6 months of facility operation at design capacity.* [510 ILCS 77/14(a)(4)]
- c) Pump stations, settling tanks, pumps, piping, or other components of a livestock waste handling facility that temporarily hold or transport waste to a storage facility sized ~~underpursuant to this Section~~ must ~~shall~~ be exempt from the storage volume requirements of this Section.
- d) The design of any livestock waste storage structure required to incorporate a freeboard ~~underpursuant to subsection (a) of this Section~~ must ~~shall~~ include a liquid level board or staff gauge. The liquid level board or staff gauge must ~~shall~~ include a mark corresponding to the summation of the livestock waste volume and the additional wash down volume ~~underpursuant to subsection (a) of this Section~~, and must ~~shall~~ be designated as the "START PUMPING" elevation.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

#### **Section 506.304 General Design and Construction Standards**

- a) Livestock waste handling facilities must ~~shall~~ be designed and constructed according to the following requirements:
- 1) Storage and transport surfaces, other than those constructed of concrete, intended to come into contact with livestock waste must ~~shall~~ be constructed or installed to achieve a hydraulic conductivity equal to or less than  $1 \times 10^{-7}$  centimeters per second.
  - 2) Storage and transport surfaces constructed of concrete and intended to come into contact with livestock waste must ~~shall~~ be constructed or installed to achieve a hydraulic conductivity equal to or less than  $1 \times 10^{-6}$  centimeters per second.
  - 3) ~~Despite Notwithstanding~~ subsection (a)(1) of this Section, storage and transport surfaces constructed at enclosed livestock waste handling facilities intended to house poultry that come into contact with livestock

waste that is in dry or solid form ~~must~~ shall be constructed or installed to achieve a hydraulic conductivity equal to or less than  $1 \times 10^{-6}$  centimeters per second.

- 4) The livestock waste handling facility ~~must~~ shall withstand, ~~at a minimum,~~ the following loads:
  - A) Lateral loads due to soil and equipment, which ~~must~~ shall be obtained from Table 2 of the MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36;
  - B) Lateral loads due to livestock waste scraping and handling equipment;
  - C) Lateral and vertical loads due to the handling and storage of livestock waste;
  - D) Vertical loads on tank tops, slats, and other horizontal surfaces, which ~~must~~ shall be obtained from Table 3 of the MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36; and
  - E) Vertical loads due to mobile equipment, stationary equipment, and structures housing the livestock.
- 5) The construction materials ~~must~~ shall be chemically compatible with the livestock waste being handled and stored and the supporting soil materials.
- 6) The livestock waste handling facility ~~must~~ shall be designed and constructed to prevent erosion and damage resulting from the transport, handling, and storage of livestock waste.
- 7) Existing subsurface drainage lines in the immediate area of the livestock waste handling facility ~~must~~ shall be removed or relocated to provide for a minimum separation distance of ~~at least~~ ~~not less than~~ 50 feet between the outermost extent of the livestock waste handling facility and the subsurface drainage line.
- 8) The minimum separation distance between the outermost extent of the livestock waste handling facility and any potential route of groundwater contamination, as defined in the Illinois Environmental Protection Act [415 ILCS 5], ~~must~~ shall be ~~at least~~ ~~not less than~~ 100 feet. In addition, the minimum separation distance between the outermost extent of the livestock waste handling facility and a non-potable well, an abandoned or plugged well, drainage well, or injection well ~~must~~ shall be ~~at least~~ ~~not less than~~ 100 feet.



- 9) The design and construction of livestock waste handling facilities must~~shall~~ include a backflow prevention device to prevent siphoning or gravity flow of livestock waste in the opposite direction of intended use.
- b) In addition to the requirements listed in this Section, livestock waste handling facilities must~~shall~~ be designed and constructed under~~pursuant to~~ the following:
- 1) Concrete livestock waste storage tanks must~~shall~~ be designed and constructed in compliance~~accordance~~ with MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36, or, in the case of circular concrete tanks, Circular Concrete Manure Tanks, MWPS TR-9.
  - 2) Components of livestock waste handling facilities that temporarily hold or transport waste for ~~the purpose of~~ liquid and solid separation, including ~~but not limited to~~ settling basins and settling tanks, must~~shall~~ be designed and constructed in compliance~~accordance~~ with MidWest Plan Service Livestock Waste Facilities Handbook, MWPS-18, or NRCS Waste Storage Structure, IL313.
  - 3) Components of livestock waste handling facilities holding semi-solid waste, including ~~but not limited to~~ picket dam structures, must~~shall~~ be designed and constructed in compliance~~accordance~~ with MidWest Plan Service Livestock Waste Facilities Handbook, MWPS-18, or similar standards used by the USDA-NRCS.
  - 4) Components of livestock waste handling facilities holding solid waste, including ~~but not limited to~~ temporary manure stacks, must~~shall~~ be designed and constructed in compliance~~accordance~~ with MidWest Plan Service Livestock Waste Facilities Handbook, MWPS-18, or similar standards used by the USDA-NRCS, including ~~but not limited to~~ Waste Storage Structure, IL313.
  - 5) Holding ponds used for the storage of livestock feedlot run-off and waste storage ponds must~~shall~~ be designed and constructed in compliance~~accordance~~ with MidWest Plan Service Livestock Waste Facilities Handbook, MWPS-18, or similar standards used by the USDA-NRCS, including ~~but not limited to~~ Waste Holding Pond, IL425.
- c) In areas where the seasonal high water table may encroach upon the bottom of the livestock waste storage structure, a perimeter foundation drainage tubing must~~shall~~ be installed as follows:

- 1) The drainage tubing must be located at a horizontal distance that provides sufficient drainage to maintain the water table elevation below the bottom of the footings.
  - 2) The tubing ~~must~~ shall drain freely to a surface water outlet or other subsurface drainage outlet.
  - 3) The tubing must include a sampling port to allow the monitoring, sampling, and reporting of any discharge from the tubing in ~~compliance~~ accordance with the requirements of 8 Ill. Adm. Code 900.Subpart E.
  - 4) The owner or operator ~~must~~ shall take necessary measures to divert the discharge from the drainage tubing, away from surface water, if monitoring results ~~under~~ pursuant to subsection (c)(3) of this Section indicate that the tubing is discharging livestock waste. Such measures ~~must~~ shall include, ~~but not be limited to,~~ diverting the flow to crop production area naturally lower in elevation than the livestock facility, or providing a manhole with a gate valve that could be closed in an emergency.
- d) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility ~~in compliance with~~ the requirements of this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.305 Additional Concrete Design and Construction Standards**

- a) In addition to the requirements ~~set forth~~ in Section 506.304 of this Subpart, the design and construction of concrete components of livestock waste handling facilities ~~must~~ shall meet the following requirements:
  - 1) Construction joints ~~must~~ shall be incorporated into the concrete in ~~compliance~~ accordance with the design guidance provided in MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36, or, in the case of circular concrete tanks, Circular Concrete Manure Tanks, TR-9;
  - 2) Water stops ~~must~~ shall be incorporated into construction joints in ~~compliance~~ accordance with the design guidance provided in MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36, or, in the case of circular concrete tanks, Circular Concrete Manure Tanks, TR-9;

- 3) Concrete minimum compressive strength requirements ~~must~~ shall be in ~~compliance~~ accordance with the design guidance provided in Table 28 of MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36, or, in the case of circular concrete tanks, Table 1 of Circular Concrete Manure Tanks, TR-9; and
  - 4) The strength, cover, and bending requirements for concrete reinforcement ~~must~~ shall be in ~~compliance~~ accordance with the design guidance provided in Table 1 of MidWest Plan Service Concrete Manure Storages Handbook, MWPS-36, or, in the case of circular concrete tanks, Circular Concrete Manure Tanks, TR-9.
- b) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility in compliance with ~~the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.306 Additional Metal Design and Construction Standards**

- a) In addition to the requirements ~~set forth~~ in Section 506.304 of this Subpart, the design and construction of metal components of livestock waste handling facilities ~~must~~ shall meet the following requirements:
- 1) All metal surfaces ~~must~~ shall be protected by a corrosion resistance system;
  - 2) Concrete footings and bases ~~must~~ shall meet the strength and load requirements ~~set forth~~ in Sections 506.304 and 506.305 of this Subpart;
  - 3) The connection of dissimilar metals ~~must~~ shall be minimized; and
  - 4) Metal components of livestock waste handling facilities ~~must~~ shall be constructed or installed according to the manufacturer's specifications and guidelines.
- b) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed the standards of this Section ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility in compliance with ~~the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.307 Additional Earthen Material Design and Construction Standards**

- a) In addition to the requirements ~~set forth~~ in Section 506.304 of ~~this Subpart~~, the design and construction of earthen components of livestock waste handling facilities must~~shall~~ meet the following requirements:
- 1) The construction and compaction of the earthen component must~~shall~~ be carried out to reduce void spaces and allow the earthen component to support the loadings imposed by the livestock waste without settling;
  - 2) The minimum top width of any berm incorporated into the design of any earthen component must~~shall~~ be 8 feet; and
  - 3) Walls incorporated into the design of an earthen component must~~shall~~ have side slopes not steeper than a 2.5 to 1 ratio of horizontal to vertical.
- b) The floor of enclosed deep bedded livestock systems and poultry litter systems that handle waste in dry or solid form, and use~~utilize~~ an earthen base must~~shall~~ be constructed to achieve a hydraulic conductivity of equal to or less than  $1 \times 10^{-6}$  centimeters per second.
- c) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator must~~shall~~ demonstrate that such modification must~~shall~~ be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility in compliance with~~as the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.308 Additional Synthetic Material Design and Construction Standards**

- a) In addition to the requirements ~~set forth~~ in Section 506.304 of ~~this Subpart~~, the design and construction of synthetic components of livestock waste handling facilities must~~shall~~ meet the following requirements:
- 1) The synthetic material must~~shall~~ be supported by a compacted base free from sharp objects;
  - 2) The use of field seams must~~shall~~ be minimized. All field seams must~~shall~~ be made according to the manufacturer's specifications and oriented in the direction subject to the least amount of stress;

- 3) The synthetic material ~~must~~ shall be resistant to or otherwise protected from damage from construction or operation and degradation by ultraviolet light;
  - 4) Synthetic components ~~must~~ shall be designed for use in livestock waste handling facilities and ~~must~~ shall be installed according to the manufacturer's specifications and guidelines;
  - 5) The liner ~~must~~ shall be chemically compatible with the livestock waste being handled and stored and the supporting soil materials; and
  - 6) The liner ~~must~~ shall have sufficient strength and durability to function at the site under the maximum expected loadings imposed by the waste and equipment and stresses imposed by settlement, temperature, construction, and operation.
- b) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility in compliance with ~~the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.309 Additional Wooden Material Design and Construction Standards**

- a) In addition to the requirements ~~set forth~~ in Section 506.304 ~~of this Subpart~~, the design and construction of wooden components of livestock waste handling facilities ~~must~~ shall meet the following requirements:
- 1) Wooden materials ~~must~~ shall be naturally resistant or treated to resist damage from decay and corrosion; and
  - 2) Construction fasteners ~~must~~ shall be resistant to corrosion.
- b) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility in compliance with ~~the requirements of~~ this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 506.310 Additional Design and Construction Standards for Construction in an Area with Shallow Aquifer Material**

- a) In addition to the other requirements of this Subpart, if aquifer material is located above or within 5 feet of the lowest point of the proposed livestock waste handling facility as determined under Section 506.302 of this Subpart, the design and construction of the facility must~~shall~~ comply with ~~the requirements of this~~ Section.
- b) Livestock waste handling facility components constructed of concrete must~~shall~~ ensure that concrete footings extend below the maximum frost depth.
- c) Livestock waste handling facility components constructed of earthen materials must~~shall~~ include the installation of an earthen or synthetic liner.
  - 1) Earthen liners must~~shall~~ meet the following requirements:
    - A) The liner must~~shall~~ consist of in-situ soil, borrowed clay, or clay/bentonite mixtures;
    - B) The minimum liner thickness must~~shall~~ be 2 feet;
    - C) The liner must~~shall~~ be constructed in lifts not to exceed 6 inches in compacted thickness; and
    - D) The construction and compaction of the liner must~~shall~~ be carried out to reduce void spaces and allow the liner to support the loadings imposed by the waste disposal operation without settling.
  - 2) Synthetic liners must~~shall~~ meet the design and construction requirements set forth in Section 506.308 of this Subpart and must~~shall~~ have a minimum thickness of 40 mil.
  - 3) The design, construction, and installation of the liner required ~~under~~pursuant to this Section must~~shall~~ be conducted under the direction of a Licensed Professional Engineer. Upon completion of construction or installation of the liner, the supervising Licensed Professional Engineer must~~shall~~ certify that the liner meets all the applicable requirements of this Section. Such certification must~~shall~~ include all supporting justification and data.
  - 4) The owner or operator of the livestock waste handling facility must~~shall~~ submit to the Department a copy of the Licensed Professional Engineer's liner certification before~~prior to~~ placing the livestock waste handling

facility in service in ~~compliance~~accordance with 8 Ill. Adm. Code 900.506(a).

- b) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~shall demonstrate that such modification ~~must~~shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility ~~in compliance with~~as the requirements of this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

### **Section 506.311 Additional Design and Construction Standards for Construction in a Flood Fringe Area**

*No new non-lagoon livestock management facility or livestock waste handling facility may be constructed within the floodway of a 100-year floodplain. A new livestock management facility or livestock waste handling facility may be constructed within the portion of a 100-year floodplain that is within the flood fringe and outside the floodway provided that the facility is designed and constructed to be protected from flooding and meets the requirements set forth in the Rivers, Lakes, and Streams Act [615 ILCS 5], Section 5-40001 of the Counties Code [55 ILCS 5/5-40001], and executive order number 4 (1979). [510 ILCS 77/13(b)(1)]*

~~Despite~~Notwithstanding the other requirements of this Subpart or 8 Ill. Adm. Code 900, the following criteria ~~must~~shall be incorporated into the design of a non-lagoon livestock management facility or livestock waste handling facility proposed for construction in the flood fringe of a 100-year floodplain:

- a) The berms and walls ~~must~~shall be designed and constructed to withstand the hydrostatic pressures from flood waters that may be exerted on the berms and walls during a flood event;
- b) The elevation of the lowest point on the berm top and wall ~~must~~shall be at the elevation of the 100-year flood plus a minimum of two feet;
- c) For facilities with unequal length and width dimensions, the facility ~~must~~shall be oriented with the longest dimension parallel to the expected direction of floodwater flow; and
- d) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~shall demonstrate that such modification ~~must~~shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility ~~in compliance with~~as the requirements of this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)

**Section 506.312 Additional Design and Construction Standards for Construction in a Karst Area**

- a) *A new non-lagoon livestock waste handling facility constructed in a karst area shall be designed to prevent seepage of the stored material into groundwater in accordance with ASAE EP393.2. Owners or operators of proposed facilities should consult with the local soil and water conservation district, the University of Illinois cooperative extension service, or other local, county, or state resources relative to determining the possible presence or absence of such areas. [510 ILCS 77/13(b)(2)]*
- b) Any livestock waste handling facility constructed in a karst area ~~must~~ shall be designed and constructed utilizing a rigid material such as concrete or steel.
- ~~c~~d) The owner or operator of the livestock waste handling facility may, upon written request and with written approval from the Department, modify or exceed these standards ~~in order~~ to meet site specific objectives. The owner or operator ~~must~~ shall demonstrate that such modification ~~must~~ shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility in compliance with the requirements of this Part.

(Source: Amended at 45 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_)