ILLINOIS POLLUTION CONTROL BOARD
September 6, 2001

IN THE MATTER OF:	)	
	)	
AMENDMENTS TO LIVESTOCK	)	R01-28
WASTE REGULATIONS	)	(Rulemaking – Land)
(35 ILL. ADM. CODE 506)	)	

Proposed Rule. Second Notice.

OPINION AND ORDER OF THE BOARD (by C.A. Manning, G.T. Girard, S.T. Lawton, Jr.):

On January 22, 2001, the Illinois Department of Agriculture (Dept. of Ag.) filed a proposal to amend the Board's livestock waste regulations at 35 Ill. Adm. Code 506 (Part 506). The Board originally adopted the Part 506 rules on May 15, 1997, in Livestock Waste Regulations: 35 Ill. Adm. Code 506, R97-15(A). Part 506 contains standards to construct livestock waste lagoons, develop waste management plans, certify livestock managers, and implement setback distances.

The Dept. of Ag.'s proposal was necessitated by recent amendments to the Livestock Management Facilities Act (LMFA) (510 ILCS 77/1 *et seq.* (2000)). To expedite this rulemaking, the Board adopted the Dept. of Ag.'s proposal for first notice on February 15, 2001, without commenting on the merits of the proposal. The Board today adopts for second notice a modified version of the Dept. of Ag.'s proposal for consideration by the Joint Committee on Administrative Rules. The Part 506 amendments proposed today for second notice accomplish two objectives. First, the rules establish or enhance design and construction standards for livestock waste handling facilities. Second, the proposed amendments repeal administrative provisions now superceded by the Part 900 rules.

In this opinion, the Board first provides the background information on LMFA and subsequent amendments, along with the background information on the current Part 506 rules. Second, the Board describes the procedures followed in developing the second-notice proposal. Third, the Board sets forth an overview of the rules. Fourth, the Board discusses issues raised during the first-notice period. Finally, the Board makes concluding remarks.

BACKGROUND

On May 21, 1996, Public Act 89-456 created the LMFA (510 ILCS 77/1 *et seq.* (2000)) to establish requirements for siting, constructing, and operating livestock management and waste handling facilities. The LMFA requires the Dept. of Ag. to propose rules to the Board based on recommendations from a Livestock Management Facility Advisory Committee (Advisory Committee) (510 ILCS 77/55 (2000)). On November 21, 1996, the Dept. of Ag. submitted proposed rules to the Board which the Board adopted on May 15, 1997. *See* Livestock Waste Regulations, 35 Ill. Adm. Code 506, R97-15(A) (May 15, 1997). Currently included in Part 506 are standards for constructing livestock waste lagoons, developing waste management plans,

certifying livestock managers, and implementing setback distances. The Board promulgated rules for lagoon financial surety in a separate rulemaking. *See* Livestock Waste Regulations, 35 Ill. Adm. Code 506, R97-15(B) (Nov. 12, 1998).

The legislature has amended the LMFA twice since the Board adopted the Part 506 rules (*see* P.A. 90-565, eff. Jan. 2, 1998; and P. A. 91-110, eff. July 13, 1999). The legislative amendments require the Dept. of Ag. to promulgate rules governing all sections of the LMFA other than design and construction standards for livestock waste handling facilities (510 ILCS 77/55 (2000)). Accordingly, the Dept. of Ag. adopted rules at 8 Ill. Adm. Code 900 (Part 900) on January 1, 2001. The amendments also require the Board, pursuant to a proposal filed by the Dept. of Ag., to promulgate standards for designing and constructing livestock waste handling facilities (510 ILCS 77/55 (2000)).

PROCEDURAL MATTERS

The Dept. of Ag. filed its proposal with the Board on January 22, 2001. The Board moved the proposal to first notice on February 15, 2001 without commenting on the merits of the proposal to expedite this proceeding. The proposal was published for first notice in the *Illinois Register* on March 2, 2001 (25 Ill. Reg. 3121). It has been available on the Board's Web site (www.ipcb.state.il.us).

During the first-notice period, the Board held two public hearings on the Dept. of Ag.'s proposal (April 2 and April 30, 2001) before Board Hearing Officer Carol Sudman. The hearing transcripts have been posted on the Board's Web site. At hearing, the following persons offered testimony or public comment: Cynthia Ervin, Warren Goetsch, and Scott Frank on behalf of the Dept. of Ag.;[1] Roy Harsch on behalf of the Illinois Farm Bureau, Illinois Pork Producers, and Illinois Beef Producers; Daniel Heacock on behalf of the Illinois Environmental Protection Agency (Agency);[2] Pam Hansen on behalf of the Illinois Stewardship Alliance;[3] Jim Scheetz on behalf of Scheetz Family Farms; Ken Koelkebeck on behalf of the University of Illinois Department of Animal Science, the State Turkey Grower's Association, and Perdue Farms; and Scott Nally on behalf of Perdue Farms.

The Board also received numerous public comments in this proceeding. These comments, listed below in order of filing, appear on the Board's Web site. Several comments

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[1] The Dept. of Ag. prefiled testimony on March 23 and April 23, 2001 which is marked as Exhibit 1 and Exhibit 2, respectively. The Dept. of Ag.'s prefiled testimony is not cited in this opinion.

[2] The Agency's prefiled testimony is marked as Exhibit 3, and referenced in this opinion as "Exh. 3 at ___."

[3] The Illinois Sterwardship Alliance's prefiled testimony is marked as Exhibit 4, and referenced in this opinion as
"Exh. 4 at ___."

were filed after the requested deadline. As no prejudice will result, the Board admits these comments to help clarify the official record.

PUBLIC COMMENT #	PERSON OR ENTITY	SHORTENED NAME
1	Illinois Milk Producers	Milk Producers
2	Dr. Ken Koelkebeck on behalf of the University of Illinois Department of Animal Science, State Turkey Growers Association, and Perdue Farms	Koelkebeck
3	Scott Nally on behalf of Perdue Farms	Perdue Farms
4	Scheetz Family Farms	Scheetz
5	Dana Walker	Walker
6 and 9	Illinois Department of Agriculture	Dept. of Ag.
7	Roy Harsch on behalf of Illinois Farm Bureau, Illinois Pork Producers, and Illinois Beef Producers	Agricultural Associations
8 and 10	Feldmann and Associates	Feldmann
11	Illinois Environmental Protection Agency	Agency

OVERVIEW OF THE RULES PROPOSED FOR SECOND NOTICE

The Part 506 amendments proposed today for second notice accomplish two objectives. First, the rules delete provisions from Part 506 that are now superseded by the Dept. of Ag.'s Part 900 rules. Several sections of Subparts A-C are deleted, and Subparts D-G are deleted in their entirety. The Board did not receive any comment regarding the deleted language; thus, those changes are not discussed in this opinion. Second, the rules establish or enhance new design and construction standards for livestock waste lagoons and livestock waste handling facilities other than lagoons (Subparts B and C). The Board will now describe the content of the Part 506 proposal.

Subpart A sets forth general provisions applicable to Part 506. Section 506.101 refers to Sections 506.201 and 506.301 for the applicability of these amendments to new facilities, and

requires the public to use Part 506 in conjunction with the Dept. of Ag.'s Part 900 rules. Section 506.103 defines terms used in Part 506, and Section 506.104 lists the documents incorporated by reference into the proposal. The proposal prescribes procedures for requesting alternatives, modifications, and waivers to the new design and construction standards in Section 506.106.

Subpart B establishes or enhances design and construction standards for livestock waste lagoons. These standards apply to designs not approved prior to the effective date of these amendments (Section 506.201). The site investigation requires determining the presence of aquifer material, and determining whether the lagoon will be located in a floodway, floodplain, or karst area (Section 506.202). Sections 506.204 and 506.205 specify lagoon design and liner standards. Groundwater monitoring requirements operate in conjunction with the Dept. of Ag.'s Part 900 rules (Section 506.206). The proposal establishes new standards for constructing lagoons in karst and flood fringe areas (Sections 506.207, 506.208). Section 506.210 establishes new requirements for secondary containment features.

Subpart C establishes design and construction standards for livestock waste handling facilities other than lagoons. These standards apply to designs not approved prior to the effective date of these amendments (Section 506.301). The site investigation requires determining the presence of aquifer material, and determining whether the livestock waste handling facility will be located in a floodway, floodplain, or karst area (Section 506.302). The proposal prescribes waste storage volume requirements in Section 506.303. Section 506.304 specifies general design and construction standards. Additional standards are established for concrete, metal, earthen material, synthetic material, and wooden material (Sections 506.305-506.309). The proposal includes new standards for constructing livestock waste handling facilities in areas with shallow aquifer material, flood fringe areas, and karst areas (Sections 506.310-506.312).

DISCUSSION

In the following paragraphs, the Board summarizes the participants' comments and testimony concerning issues raised during the first-notice period. The Board will discuss the rationale for incorporating the comments in this opinion.

Subpart A: General Provisions

Subpart A of the proposal adds and clarifies definitions, and deletes definitions and requirements now contained in the Dept. of Ag.'s Part 900 rules. In this second-notice proposal, the Board, on its own initiative, adds several new definitions in Section 506.103 to assist in interpreting the secondary containment requirement for earthen lagoons prescribed by Section 506.210 (*i.e.,* "filter strip," "grass waterway," and "terrace"). At the Agency's and Feldmann's request, the Board adds a definition of "seasonal high water table" to assist in interpreting the perimeter drainage tubing requirement of Section 506.304. The term "USDA-NRCS" is also defined for clarification. In Section 506.104, the Board updates the American Public Health Association's document incorporated by reference in subsection (a) entitled "Standard Methods for the Examination of Water and Wastewater."

Section 506.103 Definitions

The Agency commented that the definition of "animal unit" should include immature livestock in calculating animal units at a livestock management facility. Exh. 3 at 2. The term "animal unit" is a standardized unit of measure used to estimate the weight of different species of animals in relation to a cow weighing 1,000 pounds. The average mature animal weight is appropriate for determining the animal unit factor used to calculate the animal unit. Accordingly, the Board maintains this language as proposed.

Subpart B: Standards for Livestock Waste Lagoons

Subpart B sets forth new standards for designing and constructing livestock waste lagoons. The site investigation requires one or more soil borings to determine the presence of aquifer material, or to determine whether the lagoon is in a karst area (Section 506.202). The proposal clarifies the volume requirement in Section 506.204(g)(3)(C). Section 506.207 requires rigid construction materials for lagoons constructed in karst areas. Below, the Board addresses several provisions of Subpart B in greater detail, and discusses issues raised during the first-notice period.

Section 506.202 Site Investigation

Section 506.202 pertains to the site investigation requirements for constructing lagoons. The Agency expressed concerns regarding the proposed rules as they pertain to karst areas, specifically subsection (b) which requires the owner or operator to perform "one or more soil borings" to determine the presence of aquifer material or karst.

The Agency commented that a single boring in karst areas, as permitted in subsection (b), may not detect a void below the waste handling structure. Exh. 3 at 6. Voids below the structure present the greatest threats in karst areas. *Id.* at 11. The Agency stated that 1,000 borings conducted on a grid would be needed for a 90% probability to detect a void of 2.3 meters in size on a one acre site. *Id.* at 7, citing to Bensen, R.C. and LaFountain, L.J. "Evaluation of Subsidence or Collapse Potential Due to Subsurface Cavities" proceedings of the First Multidisciplinary Conference on Sinkholes, Orlando, Florida, February 1984. The Agency testified that four lagoons in Minnesota karst areas had failed. Tr. at 26.[4] In its prefiled testimony, the Agency stated that its research found two out of 14 waste lagoons located in karst areas in Minnesota with 30 meters or less of overburden soil or till over the bedrock had failed since 1972. Exh. 3 at 7. Although the Agency did not propose any language, it recommended a more comprehensive investigation. *Id.*

The Dept. of Ag. responded that several publications the Agency filed during the first-notice period were not made available to the Advisory Committee during the rule development process. PC 6 at 2.[5] Nevertheless, the Dept. of Ag. asserts that the rule proposes an "effective and efficient system" for siting facilities in karst areas, and achieves a balance between

[4] References to the April 30, 2001 transcript will be cited as "Tr. at _____."
[5] References to Public Comment will be cited as "PC ___at ___."

environmental protection and economic feasibility. *Id*.

The agricultural associations commented that multiple borings may not be necessary where substantial information exists regarding the area. PC 7 at 6. Feldmann commented that the engineer or geologist should determine the number of soil borings in a karst area based upon existing geologic information. PC 8 at 4. According to Feldmann, a specific number of borings should not be specified, although a minimum of one is important, and the Dept. of Ag. may require additional borings. *Id.*

The Board declines to amend the soil boring requirements for site investigations in karst areas. While karst areas raise special concerns regarding the proposed site investigation, the proposed requirements, along with the additional design standards, address concerns regarding groundwater contamination and structural failure. Sections 506.202 and 506.302 specify minimum requirements that provide flexibility for considering site-specific information. The specific site investigation requirements such as the number of borings, depth of borings, etc. must be determined by the licensed professional engineer (LPE) or the licensed professional geologist (LPG) based on site-specific data, and the rules allow for such determination. Further, the proposed rules allow the Dept. of Ag. to require additional borings if it is not satisfied with the LPE's or LPG's site investigation information. Since the Dept. of Ag. may require more than one boring, the Agency's change is not necessary.

Further, Section 506.207(b) now requires any lagoon waste handling facility in a karst area to be constructed using rigid materials, such as steel or concrete. The lagoon failures discussed in the Minnesota study noted by the Agency (Exh. 3 at 7) occurred in lagoons constructed without rigid materials. Accordingly, the Board declines to make any changes to the proposed site investigation requirements.

Section 506.204 Lagoon Design Standards

Section 506.204 amends lagoon design standards. The Agency commented that subsection (g)(3), pertaining to the lagoon's total design volume, should specifically include runoff and precipitation generated between manure removal events as additional volumes to be accounted for in calculating the amount of waste generated in a 270 day period. Exh. 3 at 2-3. The Dept. of Ag. did not respond to this comment.

Consistent with the American Society of Agricultural Engineers (ASAE) standards incorporated by reference, this additional storage volume requirement ensures that a structure will adequately accommodate runoff and precipitation, thereby minimizing the potential for the wash out of waste. Accordingly, the Board accepts the Agency's proposed language in subsection (g)(3)(C) to read as follows:

g) Any livestock waste lagoon subject to the provisions of this Part shall meet or exceed the following:

3) The lagoon's total design volume shall be not less than the volume calculated as the summation of the following:

C) Runoff and wash down volumes generated during a 270-day period including all runoff and precipitation from~~, based on a 6-inch rainfall covering the lagoon surface and any other areas such as open~~ lots, roofs or other surfaces where collected precipitation is directed into the lagoon plus the volume of any wash down liquids utilized within the facility that ~~which~~ are also directed into the lagoon. In no case 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

The Stewardship Alliance commented generally that the rules should contain standards for existing large scale facilities to meet minimal requirements, such as visual markers for liquid levels, at least 2'6" of freeboard, and adequate diversion of storm water along with secondary containment in the event of a breach. Exh. 4 at 4.

Sections 506.201 and 506.301 of this Part limit the applicability of the construction standards to facilities designed after the effective date of this adopted amendment. The proposed freeboard requirements, which are the same as those currently in effect, are based on the ASAE standards. The existing standards provide adequate protection against waste overflow. Further, the Stewardship Alliance's concern regarding secondary containment is addressed by the new containment requirements proposed at Section 506.210. For these reasons, the Board declines to change the proposal with respect to existing facilities.

Section 506.207 Construction in a Karst Area

Section 506.207 establishes standards for constructing lagoons in karst areas. In subsection (b), the Dept. of Ag. proposal limited the requirement for rigid construction materials to lagoons constructed below the pre-construction soil surface level. The Agency commented that rigid construction materials should also be required for lagoons constructed on the land surface in karst areas. Exh. 3 at 3. The Dept. of Ag. does not believe that rigid materials are necessary for lagoons constructed above the surface, but was not opposed to the Board considering the requirement. Tr. at 9.

The Milk Producers commented on subsection (b) that rigid construction materials should not be required in karst areas because the minimum hydraulic conductivity standard of $1x10^{-7}$ centimeters per second for clay liners is virtually impenetrable. PC 1 at 1. Further, rigid construction materials greatly add cost with little benefit. *Id.*

Concerns pertaining to the construction of lagoons in karst areas, such as structural integrity and groundwater contamination, apply to lagoons constructed both on the land surface and below grade. In light of this, rigid construction materials must be used for constructing lagoons in karst areas. While rigid construction materials may increase cost, such costs are justified given the higher costs of groundwater remediation in the event of a structural failure. Accordingly, the Board changes subsection (b) to require rigid construction materials for any lagoon constructed in a karst area. The Board makes the corresponding change in Section 506.312(b), as discussed later in this opinion.

The Stewardship Alliance commented that existing facilities in karst areas should be monitored for potential problems. Exh. 4 at 3. The Part 506 amendments regulate the design and construction of new facilities. The issue of monitoring existing facilities is addressed more appropriately in the Dept. of Ag.'s Part 900 rules.

Subpart C: Standards for the Design and Construction of Livestock Waste Handling Facilities Other Than Lagoons

Subpart C sets forth new standards for designing and constructing livestock waste handling facilities other than lagoons. The proposal clarifies the volume requirement for non-lagoon livestock waste storage facilities (Section 506.303). The design and construction standards require perimeter drainage tubing and a sampling port in areas where the seasonal high water table may encroach upon the bottom of the structure (Section 506.304). The proposal establishes permeability standards, and requirements for concrete thickness (Sections 506.304, 506.307, 506.310). Rigid construction materials are required for facilities in karst areas (Section 506.312). Below, the Board addresses several provisions in greater detail, and further discusses the issues raised during the first-notice period.

Section 506.302 Site Investigation

Section 506.302 pertains to site investigation requirements for constructing livestock waste handling facilities other than lagoons. Subsection (g)(2) requires site investigations for karst areas to include "one or more" soil borings. The Agency reiterated its concerns raised in Section 506.202 that a single soil boring is not sufficient to reliably detect the presence of voids in karst areas. Exh. 3 at 6.

The agricultural associations' and Feldmann's comments about Section 506.202 also apply to this Section: multiple borings may not be necessary where substantial information exists regarding the area (PC 7 at 6); and the engineer or geologist should determine the number of soil borings in a karst area based upon existing geologic information (PC 8 at 4). The Dept. of Ag. responded, as discussed in Section 506.202, that the rule proposes an "effective and efficient system" for siting facilities in karst areas, and achieves a balance between environmental protection and economic feasibility. PC 6 at 2.

For the reasons discussed previously in Section 506.202, the Board declines to amend the soil boring requirements for site investigations in karst areas. While karst areas raise special concerns regarding the proposed site investigation, the proposed requirements, along with the additional design standards, address concerns regarding groundwater contamination and structural failure. Section 506.302(g) specifies minimum requirements that provide flexibility to consider site-specific information. The specific site investigation requirements such as the number of borings, depth of borings, etc. must be determined by the LPE or the LPG based on site-specific data, and the rules allow for such determination. Further, the proposed rules allow the Dept. of Ag. to require additional borings if it is not satisfied with the LPE's or LPG's site investigation information. Since the Dept. of Ag. may require more than one boring, the Agency's change is not necessary.

Further, Section 506.312(b) now requires any livestock waste handling facility in a karst area to be constructed using rigid materials, such as steel or concrete. This change affords adequate protection against groundwater contamination and structural failure. Accordingly, the Board declines to make any changes to the proposed site investigation requirements.

Section 506.303 Non-Lagoon Livestock Waste Storage Volume Requirements

Section 506.303 establishes standards for non-lagoon storage volume requirements. The Agency seeks to require that runoff and precipitation be considered livestock waste, and be specifically included in the rule as additional volume to be calculated into the 150-day storage period. Exh. 3 at 4. The Agency suggested the following language change to subsections (a)(1)-(2).

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 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 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; ~~based on a 6 inch rainfall covering the storage structure surface and any other areas where precipitation is directed into the storage structure;~~

2) The volume of all wash down liquid generated during the 150-day period that is directed into the livestock waste handling facility ~~Additional wash down liquid volumes~~; and

The Dept. of Ag. Did not respond to this suggestion.

Feldmann commented that the volume for a 25 year-24 hour storm event should be added for drainage areas other than the structure's surface. PC 8 at 2. The Dept. of Ag.'s response did not indicate a strong objection to this change. PC 9 at 2.

The volume requirement for non-lagoon livestock waste storage facilities must provide for storage of runoff volume generated during the 150-day period. Further, a similar storage requirement is also appropriate for wash down liquids. Accordingly, the Board accepts the Agency's suggested changes to Sections 506.303 (a)(1) and (a)(2).

Section 506.304 General Design and Construction Standards

This Section generated a large amount of discussion. Specifically, comments focused on:

(1) the hydraulic conductivity standard for the poultry industry; (2) the term "seasonal high water table"; (3) the perimeter drainage tubing requirement; and (4) the Agency's recommendation for a sampling port and a collection area. The Board addresses these issues below.

Hydraulic Conductivity Standard. Subsection (a) pertains to design and construction standards for the hydraulic conductivity of storage and transport surfaces. As detailed below, the poultry industry commented that the proposed hydraulic conductivity standard of $1x10^{-7}$ centimeters per second is not necessary for poultry buildings. The poultry industry maintained that this is because the enclosed handling facilities in which waste is managed in a dry or solid form have a low potential for groundwater contamination. Moreover, the standard would add significant costs and potentially injure the birds housed in the facilities, according to the poultry industry.

Koelkebeck commented that the proposed permeability standard may require poultry producers to construct concrete floors, adding a cost of $25,000-$30,000 per building, thereby deterring broiler companies from producing in Illinois. PC 2 at 3. According to Perdue Farms, the cost of concrete would be $20,200 per barn, or $60,600 per farm unit. PC 3 at 2. In addition to cost considerations, Perdue Farms cautioned that concrete floors can injure birds' tender foot pads, thereby increasing the risk of infection. Tr. at 70.

Koelkebeck asserted that these costs and potential injuries are not justified, as groundwater safety would not be compromised by a lower permeability standard. Koelkebeck's research findings support the conclusion that the leaching of nutrients from turkey facilities would not contaminate groundwater even in areas where permeability does not exceed the hydraulic conductivity standard of $1x10^{-7}$ cm per second. PC 2 at 2-3.

Koelkebeck's research study[6] examined the degree of permeability and leaching of nitrogen, phosphorus, and potassium in solid form from earthen floors within three turkey barns in Southeastern Illinois. PC 2 at 2. The study showed that the migration of nutrients (nitrogen, phosphorus and potassium) in the soil was essentially limited to a depth of four feet below the surface. *Id.*, Att. at 7-8.

The Board's review of the study demonstrates that the existing soil permeability was protective of the underlying groundwater. Thus, at a minimum, the permeability level for poultry facilities may be specified at the permeability levels of the soils underlying the study facilities (in the range $1x10^{-6}$ cm per second) and be protective of the groundwater. PC 2, Att. at 25. The Dept. of Ag. would support a revised permeability standard of $1x10^{-6}$ cm per second for facilities where poultry litter is handled in a solid form. PC 6 at 4.

Koelkebeck's study and testimony show that the general permeability standard in the Dept. of Ag. proposal (Section 506.304(a)(1)) is not necessary for livestock waste handling facilities intended for housing poultry, such as turkeys and laying hens. Although Koelkebeck's

[6] "The Degree of Permeability and Leaching of Nitrogen, Phosphorus, and Potassium in Soils from Earthen Floors Within Turkey Barns in Southeastern Illinois." PC 2, Att. 1.

study focused on facilities housing turkeys, the Board finds that an alternative permeability standard is appropriate for facilities housing poultry in which waste is managed in a dry or solid form, as these facilities have a relatively low potential for groundwater contamination.

Cost is not the Board's determining factor in revising the hydraulic conductivity standard for the poultry industry. Koelkebeck's study is also persuasive in demonstrating that a permeability standard of $1x10^{-6}$ cm per second will not compromise groundwater safety. Another supporting factor for this revised standard is the fact that poultry waste handling facilities are enclosed, and the waste is not exposed to elements. This further minimizes the migration of nutrients to the underlying groundwater. Based on all of these factors, the Board will add a new subsection (a)(3) to Section 506.304 to address the permeability requirements for poultry waste handling facilities, and renumbers existing subsections (a)(3) through (a)(8).

Seasonal High Water Table. Subsection (c) establishes perimeter drainage requirements for areas where the seasonal high water table may encroach upon the bottom of the livestock waste storage structure.

The Agency and Feldmann commented that the proposed rules do not contain a provision for determining the seasonal high water table. Exh. 3 at 5; PC 8 at 2. To clarify subsection (c), the Board adds a definition of "seasonal high water table" in Section 506.103. Seasonal high water table is defined in Section 506.103 as follows:

> "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.[7]

Since the water table elevation changes on a seasonal basis, the seasonal high water table refers to the highest level of the water table encountered on a yearly basis. This definition should provide adequate guidance to the LPE or LPG to use the appropriate hydrogeologic information, such as soil boring data or historical hydrogeologic site information to determine the high water table.

Perimeter Drainage Tubing. In addition to questions pertaining to the seasonal high water table, a number of participants including the Agency, the agricultural associations, and Scheetz expressed concerns regarding the perimeter drainage tubing requirement proposed in subsection (c).

First, the comments addressed whether perimeter drainage tubing should be required. The agricultural associations and Scheetz proposed to delete the perimeter drainage requirement, arguing that many drainage outlets in Illinois are on relatively flat ground which would require a lift station for the groundwater drainage to reach a surface water outlet. PC 4 at 1. This requirement would be very expensive, and there is no evidence that it is needed. *Id.*; PC 7 at 6.

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[7] *See* Freeze, A.R. & Cherry, J.A, Groundwater (Prentice-Hall, Inc. 1979).

The Dept. of Ag. did not respond to these comments.

Feldmann commented that his experience with soil investigations found that half of the sites with aquifer material do not have a seasonal high water table within close proximity to the floor. PC 8 at 2.

While cost is a consideration, the Board finds that the requirement of perimeter drainage tubing is justified in areas where flooding may increase the risk of groundwater contamination.

Second, the comments addressed the location of the perimeter drainage tubing. The Dept. of Ag. proposal required the drainage tubing to be installed at an elevation of one foot below the bottom of the footing. As the Agency and Feldmann suggest, installing drainage tubing one foot below the bottom of the footing is not necessary to prevent the water table from encroaching on the bottom of the storage structure. Exh. 3 at 5; PC 8 at 3. As long as the elevation of the top of drainage tubing is below the bottom of the footing, the water table will be maintained below the footing. Placing the tubing below the elevation of the bottom of the footing provides a reasonable assurance that the seasonal high water table does not pose a threat to the structure's integrity. The Dept. of Ag. did not object to modifying this language. PC 6 at 3. Accordingly, the Board adds subsection (c)(1) to clarify that the drainage tubing must be below the bottom of the footing.

Sampling Port and Collection Area. The Agency proposed that subsection (c) require a sampling port immediately downstream of the perimeter drainage tubing, as discharge from the drainage tubing needs to be monitored and sampled to protect against discharge of livestock waste to surface waters. Exh. 3 at 5. The Dept. of Ag. responded that a sampling port is unnecessary and unreasonable. PC 6 at 3. When properly constructed, there is not a strong probability for the release of manure through the perimeter drainage tube. *Id.* The agricultural associations added that the Agency has not provided evidence to justify a sampling port requirement, nor has it examined the economic impact of this change. PC 7 at 5. A sampling port fundamentally modifies the proposal, and should not be added at this late stage. *Id.* Feldmann suggested monitoring the perimeter drainage tubing during the spring when water tables are high. PC at 3. Producers can simply collect a sample in a jar and inspect it visually for turbidity and odor. *Id.*

The Board adds the sampling port requirement at Section 506.304(c) because the perimeter drainage tubing may convey livestock waste that has leaked from the waste storage structure, particularly when water table elevations are high. Since the flow from the tubing may enter surface water, inspection or sampling of the flow from the drain would serve as an early detection system to prevent a discharge of waste to the waters of the State. This additional requirement addresses the same concerns as the perimeter tubing sampling provision for facilities constructed in areas with shallow aquifer material (Section 506.310), *i.e.,* preventing discharge of waste to waters of the State. While the Board rules require a sampling port as part of the design standards, the actual sampling and monitoring requirements must be done in accordance with the Dept. of Ag.'s regulations pertaining to operational requirements.

In addition to the sampling port, the Agency recommended that subsection (c) contain a

provision for a diversion of any livestock waste discharge from the drainage tubing away from surface waters to a collection area. Exh. 3 at 5. If the tubing receives livestock waste, then there must be a means to contain the waste and prevent discharge to waters of the State. *Id*.

The Dept. of Ag. and Feldmann both opposed the idea of a collection area as costly and unnecessary. PC 9 at 3; PC 8 at 4. The Agency responded that the field or collection area does not need to be a costly, permanent fixed structure that meets the permeability and storage volume requirements of Part 506, nor would it constitute a water of the State. PC 11 at 2. The storage area could be an area of crop production, naturally lower in elevation than the livestock facility, that could receive livestock waste in an emergency via a gate valve; or a manhole with a gate valve that could be closed in an emergency allowing the manhole to fill with waste until disposal. *Id.* The Dept. of Ag. did not comment on the Agency's response.

The Board declines to add a requirement for a permanent collection area. However, if livestock waste leaks from the storage structure into the drainage tubing, the owner or operator must divert the waste discharge away from surface waters. Methods for handling the waste discharge may include diverting the flow to a crop production area naturally lower in elevation than the livestock facility, or providing a manhole with gate valve that could close in an emergency.

Section 506.305 Additional Concrete Design and Construction Standards

Section 506.305 establishes additional concrete design and construction standards, such as the placement of construction joints and water stops. Scheetz commented that subsection (a) should not require a construction joint and waterstop every 50 feet of concrete. PC 4 at 1. A single slab, rather than a construction joint every 50 feet, is less expensive and there is less likelihood of a broken seal and leakage. *Id.* The Dept. of Ag. did not respond to this comment.

Section 506.305(a) requires construction joints in accordance with the design guidance provided in the Midwest Plan Service (MWPS) Center Concrete Manure Storages Handbooks, MWPS-36 or TR-9 (Circular Tanks). These guidance handbooks, developed to address livestock waste concrete structures, provide detailed specifications for constructing livestock waste handling facilities, including the placement of joints and water stops. The Board declines to make any changes to the proposed concrete design standards. However, Section 506.305(b) allows for alternative standards or modifications. If site-specific conditions warrant any deviations from the design requirements, the Dept. of Ag. may approve such deviations.

Section 506.307 Additional Earthen Material Design and Construction Standards

Subsection (b) of the Dept. of Ag. proposal required deep bedded systems with an earthen base to achieve a hydraulic conductivity equal to or less than $1x10^{-7}$ cm per second. Feldmann commented that this permeability requirement is unnecessary since these housing systems use bedding to absorb liquids, and are generally roofed and protected from precipitation. PC 8 at 2. Solid waste handling systems not exposed to precipitation should be exempt from this requirement absent site-specific conditions so warranting. *Id.* The Dept. of Ag. responded that it supports a change in the permeability level to $1x10^{-6}$ cm per second in subsection (b) where the

poultry litter is handled in a solid form.

As discussed above under Section 506.304 with regard to permeability requirements for facilities housing poultry, the rules must prescribe an alternative hydraulic conductivity standard to address groundwater contamination concerns. The Board accepts the Dept. of Ag.'s suggestion for a revised permeability standard of 1 x 10^{-6} cm per second for enclosed deep bedded systems that handle livestock waste in solid form.

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

In subsection (b), the Dept. of Ag. proposed to increase the concrete thickness for constructing facilities in areas with shallow aquifer material. The proposal increased floor thickness from four inches to five inches, and increased the wall thickness from six inches to eight inches. The agricultural associations commented that increasing the concrete thickness adds considerable cost without significant benefit, and that site-specific conditions should determine whether additional requirements are needed. PC 7 at 3. In support of this contention, the agricultural associations cited the Dept. of Ag.'s testimony at hearing that it was not aware of the failure of any facility constructed in accordance with existing standards. PC 7 at 3 (citing to Tr. at 13). Scheetz further commented that increasing concrete thickness to five inches, as the Dept. of Ag. proposes, would increase the cost of a facility by $48,720. PC 4 at 1.

Feldmann commented that a minimum thickness should not be specified in the event that the engineer determines that a greater thickness is warranted for a specific site. PC 8 at 3. Feldmann suggested that the rule follow the structural design provisions of ASAE EP393.3. PC 10 at 1. The difference in seepage potential between the ASAE standards and the Dept. of Ag.'s proposed thickness is negligible. *Id.* Rather than spend money to increase concrete thickness, Feldmann suggested other measures to prevent seepage, such as designs based on site-specific data, *e.g.,* soil bearing strength, soil density, and horizontal earth pressures. *Id.*

The Dept. of Ag. responded that a minimum thickness was proposed to ensure the structural integrity of the containment structure, and to prevent seepage of the material to groundwater. PC 9 at 3. Moreover, the proposal allows the engineer to submit alternative design proposals. *Id*.

The Dept. of Ag. has not provided any technical justification for increasing the thickness of exterior walls and floors other than to state that enhanced protection should be required when facilities are proposed in certain areas that are deemed sensitive. The design standards of the MWPS-36 guidance documents, which are incorporated by reference, specify the criteria for increasing the thickness of concrete floors and walls beyond the minimum requirement. Further, the concerns regarding structural integrity are also addressed by the minimum load requirements specified at Section 506.304. Therefore, the Board deletes the additional requirements for concrete thickness specified at Section 506.310(b)(1) and (b)(2) of the Dept. of Ag.'s proposal.

In subsection (c)(1), the Dept. of Ag.'s proposal established requirements for earthen liners in areas with shallow aquifer material. Walker commented that the pollution potential in

areas with shallow aquifer material is high enough to warrant requiring a synthetic liner. Alternatively, if earthen liners are allowed, they should meet the same specifications as Section 506.204(b)(3) and (b)(4). The Dept. of Ag. did not respond to this comment.

Earthen liners are adequate if safety standards are in place. However, the standards imposed at Section 506.204(b)(3) and (b)(4) are appropriate for non-lagoon facilities. The lagoon liner permeability requirement specified at Section 506.205(b)(3) is already proposed for non-livestock waste handling facilities at Section 506.304(a). Accordingly, the Board adds the liner compaction requirement found at Section 506.205(b)(4) to Section 506.310(c)(1)(D).

Subsection (c)(3) requires an LPE to certify liners for facilities in areas with shallow aquifer material. Exh. 3 at 6. The Agency recommended that this provision require an LPE to certify the liner requirements in Sections 506.310 and 506.304. *Id.* The Dept. of Ag. did not comment on this matter. The Board declines to make this change because the existing proposal parallels the requirements specified for livestock waste lagoon liners. The proposed requirements apply to liners constructed in areas with shallow aquifer material where a greater potential for groundwater contamination exists.

In subsection (d) of the Dept. of Ag.'s proposal, the rules called for drainage tubing to be installed one foot below the bottom of the footing. Installing tubing one foot below the footing is not necessary for the same rationale discussed in Section 506.304(c). Since the drainage tubing requirements, including monitoring and sampling are addressed under the general standards at Section 506.304, the Board deletes Section 506.310(d) of the Dept. of Ag. proposal.

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

Section 506.312 establishes additional standards for constructing non-lagoon waste handling facilities in karst areas. In subsection (b), the Dept. of Ag.'s proposal limited the requirement for rigid construction materials to livestock waste handling facilities constructed below the pre-construction soil surface level. The Agency commented that rigid construction materials should also be required for livestock waste handling facilities constructed on the land surface. Exh. 3 at 3. As it commented regarding Section 506.207, the Dept. of Ag. does not believe that rigid materials are necessary for facilities constructed above the surface, but was not opposed to the Board considering the requirement. Tr. at 9.

Concerns pertaining to the livestock waste handling facilities in karst areas, such as structural integrity and groundwater contamination, apply to livestock waste handling facilities constructed both on the land surface and below grade. Therefore, rigid construction materials must be used for constructing lagoons in karst areas. For the same reasoning as discussed under Section 506.207, the Board makes the corresponding change to Section 506.312(b).

Subpart D: Certified Livestock Manager; Subpart E: Penalties, Subpart F: Financial Responsibility; Subpart G: Setbacks; Appendix A: Surety Instruments

These Subparts are superseded by the Dept. of Ag.'s Part 900 rules, and accordingly, the

Board proposes to delete them. The Board did not receive any comments on these Subparts.

CONCLUSION

The Board moves the proposed amendments to Part 506 to second notice today to implement the amendments to the LMFA. The Board finds that these rules are technically feasible and economically reasonable. Changes from first notice are indicated by double strikes and underlines.

ORDER

The Board directs the Clerk to file with the Joint Committee on Administrative Rules the following proposed amendments for second notice:

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 ~~Certification of~~ Construction in a Karst Area
506.208 ~~Failure to Register or Construct in Accordance with Standards~~Construction in a Flood Fringe Area
506.209 Lagoon Closure and Ownership Transfer (Repealed)
506.210 Secondary Containment

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

Section
506.301 ~~Purpose~~ Applicability
506.302 ~~Scope and Applicability~~ Site Investigation
506.303 ~~Waste Management Plan Contents~~ Non-lagoon Livestock Waste Storage Volume Requirements
506.304 ~~Livestock Waste Volumes~~ General Design and Construction Standards
506.305 ~~Nutrient Content of Livestock Waste~~ Additional Concrete Design and Construction Standards
506.306 ~~Adjustments to Nitrogen Availability~~Additional Metal Design and Construction Standards
506.307 ~~Targeted Crop Yield Goal~~Additional Earthen Material Design and Construction Standards
506.308 Additional Synthetic Material Design and Construction Standards
506.309 ~~Nitrogen Credits~~Additional Wooden Material Design and Construction Standards
506.310 ~~Records of Waste Disposal~~Additional Design and Construction Standards for Construction in an Area with Shallow Aquifer Material
506.311 ~~Approval of Waste Management Plans~~Additional Design and Construction Standards for Construction in a Flood Fringe Area
506.312 ~~Sludge Removal~~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)

APPENDIX A Surety Instruments (Repealed)
ILLUSTRATION A Surety Bond (Repealed)
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._____, 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 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 ~~Waste Management Plan~~, is set forth at Section 506.301 ~~506.302~~ of this Part. ~~The applicability of Subpart D, Certified Livestock Manager, is set forth at Section 506.401 of this Part. The applicability of Subpart F, Financial Responsibility, is set forth at Section 506.601 of this Part. The applicability of Subpart G, Setbacks, is set forth at Section 506.701 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 25 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 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 ~~herein~~ shall have the following meanings:

~~"AGENCY" MEANS THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY. [510 ILCS 77/10.5]~~

"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 shall be determined by dividing the average mature animal weight by 1,000. 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 herein, such that there is at least two feet or more present within any five foot section of a soil boring performed in accordance with Sections ~~Section~~506.202 and 506.302 of this Part.

~~"CERTIFIED LIVESTOCK MANAGER" MEANS A PERSON THAT HAS BEEN DULY CERTIFIED BY THE DEPARTMENT AS AN OPERATOR OF A LIVESTOCK WASTE HANDLING FACILITY. [510 ILCS 77/10.15]~~

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

~~"FARM RESIDENCE" MEANS 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 BUT ARE NOT LIMITED TO 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. [510 ILCS 77/10.23]~~

"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 pursuant 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] Livestock waste handling 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.

"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 21, 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 ceased operation on or after July 13, 1999, 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 and that has been operated as a livestock management facility for 4 consecutive months at any time within the previous 10 years shall not be considered a new or expanded livestock management or waste handling facility. [510 ILCS 77/13(k)] For facilities that have ceased operation prior to July 13, 1999, 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 with the previous 10 years shall not be considered a new or expanded livestock management or waste handling facility.

~~"NON-FARM RESIDENCE" MEANS ANY RESIDENCE WHICH IS NOT A FARM RESIDENCE. [510 ILCS 77/10.47]~~

~~"Occupied residence" means a house or other type of shelter that is intended or used for human occupancy and has been occupied by humans for more than a total of six months in the last two years at that location. For the purposes of this definition, "intended or used for human occupancy" means running water and sanitation are provided within the residence.~~

"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 upon the completion of construction or modification in accordance with the requirements of this Part.

~~"POPULATED AREA" MEANS ANY AREA WHERE AT LEAST 10 INHABITED NON-FARM RESIDENCES ARE LOCATED OR WHERE AT LEAST 50 PERSONS FREQUENT A COMMON PLACE OF ASSEMBLY OR A NON-FARM BUSINESS AT LEAST ONCE PER WEEK. [510 ILCS 77/10.60] The existence of a populated area shall be determined by identifying the area around the livestock management or livestock waste handling facility delineated by a distance equal to the applicable setback distance and identifying the number of residences or the existence of a non-farm business or the existence of a common place of assembly within that area. For the~~

~~purpose of setback requirements, common places of assembly or non-farm businesses include but are not limited to churches, hospitals, schools, day care centers, manufacturing companies, land managed for recreational or conservation purposes, museums, camps, parks, retail and wholesale facilities, and shopping centers. A common place of assembly or a non-farm business includes places that operate less than 52 weeks per year, such as schools with seasonal vacation periods and businesses or other places which experience seasonal shutdowns, and parks, camps, and recreational areas which experience seasonal shutdowns or reduced attendance during a portion of the calendar year, provided that such places are frequented by at least 50 persons at least once per week during the portions of the year when seasonal shutdowns or reductions in attendance do not occur.~~

~~"Residence" means a house or other structure, including all attachments to the house or structure, which is used as a place of human habitation.~~

"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.

~~"Serviced" means, with reference to a livestock waste lagoon, that corrective action is taken as necessary to assure the integrity of the lagoon and its berm and associated appurtenances, including but not limited to removal or repair of burrow holes, trees and woody vegetation, freeboard level, erosion, settling of berm, berm top maintenance, leaks, and seepage.~~

"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 25 Ill. Reg. _____, effective _____)

Section 506.104 Incorporations by Reference

a) The Board incorporates the following materials by reference:

1) APHA. American Public Health Association, 1015 Fifteenth Street, NW, Washington, DC 20005, (202) 789-5600, "Standard Methods for the Examination of Water and Wastewater", ~~19th~~ 20th Edition, 1995.

2) ASAE. American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659, (616) 429-5585:
"Manure Storages", ASAE Standards 1998, ASAE EP393.2, December 1997, pp. 649-652.
~~"Design of Anaerobic Lagoons for Animal Waste Management", ASAE Standards 1992, ASAE EP403.1, 1992, pp. 498-500.~~
"Design of Anaerobic Lagoons for Animal Waste Management", ASAE Standards 1998 ~~1993~~, ASAE EP403.2, August 1993, pp. 656-659 ~~543-546~~.

3) IDNR-ISGS. Illinois Department of Natural Resources-Illinois State Geological Survey, 615 E. Peabody Drive, Champaign, IL 61820-6964, (217) 333-4747, "Karst Terrains and Carbonate Rocks of Illinois", Illinois Map 8, 1997.

4) MWPS. MidWest Plan Service, 122 Davidson Hall, Iowa State University, Ames, IA 50011-3080, (515) 294-4337:
"Livestock Waste Facilities Handbook" MWPS-18, 3rd Edition, 1993.
"Concrete Manure Storages Handbook" MWPS-36, 1st Edition, 1994.
"Circular Concrete Manure Tanks" Technical Resource TR-9, March 1998.

5)~~3)~~ NTIS. National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4600, "Methods for the Determination of Inorganic Substances in Environmental Samples", EPA Publication No. EPA-600/R-93/100 (August 1993), Doc. No. PB 94-120821.

6)~~4)~~ USDA-NRCS. United States Department of Agriculture - Natural Resources Conservation Service, 1902 Fox Drive, Champaign, IL 61820:~~,~~
"Waste Holding Pond", Illinois Field Office Technical Guide, Section IV, IL425, p. 5, June 1992.
"Waste Storage Structure", Illinois Field Office Technical Guide, Section IV, IL313, p. 6, June 1992.
"Waste Treatment Lagoon", Illinois Field Office Technical Guide, Section IV, IL359, p. 5, June 1992.

b) This Section incorporates no later amendments or editions, but does include errata sheets specific to the referenced document.

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.105 Recordkeeping (Repealed)

~~a) The Department shall maintain a file for all facilities registering or otherwise filing documents with the Department under these regulations.~~

~~b) The file shall contain all registration materials, along with all supporting data and justifications, records of Department certification and determinations, groundwater monitoring results (if required), waste management plans (if required), and any other information submitted to the Department by the owner or operator of a facility.~~

~~c) Copies of materials in the file for a registered facility shall be available for public inspection.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.106 Alternatives, Modifications and Waivers

a) All requests for alternatives, modifications, and waivers to these regulations, where allowed by Sections 13(e) and 15(a) of the Act [510 ILCS 77/13(e),15(a)] ~~15(a) and (e) of the Act [510 ILCS 77/15(a),(e)]~~ or this Part ~~(Sections 506.202(d), 506.204(h), 506.205(f), 506.206(j), 506.209(a)(2))~~ shall be made in writing to the Department. Construction may not begin or continue until the request for alternative, modification, or waiver is granted.

b) Each request for an alternative, modification, or waiver 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 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 25 Ill. Reg. _____, effective _____)

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

Section 506.201 Applicability

This Subpart shall apply to any new or modified lagoon, the design of which has not been approved by the Department prior to the effective date of this Part. The standards and specifications for livestock waste lagoon construction contained in this Subpart shall be utilized in the design plans and construction of the lagoon in accordance with the registration of lagoons required in Subpart F of 8 Ill. Adm. Code 900.

~~a) This Subpart applies to any lagoon that is new or modified and has not been placed in service as of the effective date of this Part.~~

~~b) For the purposes of this Subpart the number of animal units at a livestock management facility is the maximum design capacity of the livestock management facility.~~

~~c) In addition, a lagoon registered and certified pursuant to the emergency rules adopted in R97-14 at 20 Ill. Reg. 14903, effective October 31, 1996 and the emergency rules adopted in R97-14 at 21 Ill. Reg. 4313, effective March 31, 1997, shall be considered as registered and certified pursuant to this Subpart.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.202 Site Investigation

a) The owner or operator of a ~~new or modified livestock waste~~ lagoon constructed pursuant to this Subpart shall conduct a site investigation in accordance with the requirements of this Section to determine the following: ~~if aquifer material is present (or not present) within 50 feet of the planned bottom of the lagoon.~~

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 shall perform one or more soil borings that ~~which~~ shall be located within the final lagoon area or within 20 feet of the final exterior berm toe. The boring shall be performed to determine the presence of aquifer material or karstified carbonate bedrock as follows:

1) The soil boring shall extend to a depth that includes 50 feet below ~~from~~ 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 shall be recovered from each soil boring ~~to ensure that no gaps occur in the sample column~~; and

4) Upon completion, the boring(s) shall be properly abandoned and sealed 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 ~~and~~ the structural integrity of the livestock waste management facility, the Department shall require additional soil borings.

d) As an alternative to performing the soil boring(s) required under subsection (b) or (c) of this Section, the owner or operator of the ~~a livestock waste~~ lagoon may propose to the Department to utilize alternative information source(s). The Department shall evaluate the proposal; ~~shall~~ determine whether the alternative information source(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 ~~shall~~ notify the owner or operator of the Department's finding.

e) 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 shall include the additional requirements of Section 506.206 of this Subpart.

f) If the results of the soil boring conducted pursuant 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 shall be met:

1) The Department shall conduct a visual inspection of the surrounding area to determine the presence of natural depressions during the pre-construction site inspection as required pursuant to 8 Ill. Adm. Code 900.604(a). Construction may not occur within 400 feet of a natural depression in a karst area; and

2) The Licensed Professional Engineer or Licensed Professional Geologist shall evaluate the results of the soil boring conducted pursuant to subsection (b) of this Section. If, as a result of the soil boring, a void of 1 foot or greater in vertical distance is discovered, the following requirements shall be met:

A) The Department may require additional borings to determine the extent of the void;

B) Notwithstanding the other requirements of this Subpart, the owner or operator shall submit to the Department a plan for the design of the lagoon which shall include the additional design requirements as set forth in Section 506.207 of this Part and shall include any additional design

requirements deemed necessary by the Licensed Professional Engineer; and

C) The Department shall review and approve the plan required pursuant to subsection (f)(2)(B) of this Section prior to construction. The Department may also require additional design criteria before the plan is approved and construction may begin.

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

g)~~e)~~ The site investigation in accordance with subsection (b), (c), ~~or~~ (d), (e), or (f) of this Section shall be conducted under the direction of a Licensed Professional Engineer or Licensed Professional Geologist. ~~Upon completion of the site investigation as required under subsection (b), (c) or (d) of this Section, the supervising Licensed Professional Engineer or Licensed Professional Geologist shall certify that the site investigation meets all the applicable requirements of this Section, and whether aquifer material shall be considered present (or not present) within 50 feet of the planned bottom of the lagoon in accordance with Section 506.203 of this Part. Such certification shall include all supporting data and justification.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.203 Registration (Repealed)

~~a) Prior to new construction or modification of ANY EARTHEN LIVESTOCK WASTE LAGOON AFTER THE EFFECTIVE DATE OF this Part, such earthen livestock waste lagoon SHALL BE REGISTERED BY THE OWNER OR OPERATOR WITH THE DEPARTMENT ON A FORM PROVIDED BY THE DEPARTMENT in accordance with the requirements of this Section. LAGOONS CONSTRUCTED PRIOR TO THE EFFECTIVE DATE OF this Part MAY REGISTER WITH THE DEPARTMENT AT NO CHARGE. [510 ILCS 77/15(b)]~~

~~b) The registration form, accompanied by a $50 fee, shall include the following:~~

~~1) NAME(S) AND ADDRESS(ES) OF THE OWNER AND OPERATOR WHO ARE RESPONSIBLE FOR THE LIVESTOCK WASTE LAGOON;~~

~~2) GENERAL LOCATION OF LAGOON;~~

~~3) DESIGN CONSTRUCTION PLANS AND SPECIFICATIONS (including a lagoon plot plan with dimensions and elevations);~~

~~4) SPECIFIC LOCATION INFORMATION (noted on a facility site map or the lagoon plot plan):~~

A) The location and DISTANCE TO the nearest PRIVATE OR PUBLIC POTABLE WELL;

B) The location and DISTANCE TO THE CLOSEST OCCUPIED PRIVATE RESIDENCE (OTHER THAN ANY OCCUPIED BY the OWNER OR OPERATOR);

C) The location and DISTANCE TO THE NEAREST STREAM;

D) The location and DISTANCE TO THE NEAREST POPULATED AREA;

E) The location and distance to the nearest abandoned or plugged well, drainage well or injection well; and

F) The location of any subsurface drainage lines within 100 feet of the lagoon;

5) ANTICIPATED BEGINNING AND ENDING DATES OF LAGOON CONSTRUCTION;

6) TYPE OF LIVESTOCK AND NUMBER OF ANIMAL UNITS;

7) A certification by the supervising Licensed Professional Engineer or Licensed Professional Geologist, accompanied by supporting justification and data, certifying that the site investigation meets all the applicable requirements of Section 506.202 of this Part, whether aquifer material is considered present (or not present) within 50 feet of the planned bottom of the lagoon; and

8) Where applicable, a copy of the synthetic liner manufacturer's compatibility statement and liner maintenance guidelines. [510 ILCS 77/15(b)]

e) THE DEPARTMENT UPON RECEIPT OF A LIVESTOCK WASTE LAGOON REGISTRATION FORM SHALL REVIEW THE FORM TO DETERMINE THAT ALL REQUIRED INFORMATION HAS BEEN PROVIDED. THE PERSON FILING THE REGISTRATION SHALL BE NOTIFIED WITHIN 15 WORKING DAYS of receipt by the Department THAT REGISTRATION IS COMPLETE OR THAT CLARIFICATION INFORMATION IS NEEDED. NO LATER THAN 10 WORKING DAYS AFTER THE RECEIPT OF THE CLARIFICATION INFORMATION, THE DEPARTMENT SHALL NOTIFY THE OWNER OR OPERATOR THAT REGISTRATION IS COMPLETE or that additional clarification information is needed. [510 ILCS 77/15(b)]

d) The Department may, as a condition of the issuance of a livestock waste lagoon registration, conduct periodic site inspections of a livestock waste lagoon to assess its degree of compliance with the requirements of the Livestock Management Facilities Act [510 ILCS 77] and the requirements of this Part. THE PERSON MAKING ANY INSPECTION SHALL COMPLY WITH REASONABLE ANIMAL HEALTH PROTECTION PROCEDURES AS REQUESTED BY THE OWNER OR OPERATOR. [510 ILCS 77/15(b)]

e) CONSTRUCTION SHALL NOT BEGIN UNTIL 30 DAYS AFTER SUBMITTAL OF A REGISTRATION FORM BY CERTIFIED MAIL TO THE DEPARTMENT. [510 ILCS 77/15(b)]

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.204 Lagoon Design Standards

a) The owner or operator of *any livestock waste lagoon subject to* ~~ANY LIVESTOCK WASTE LAGOON SUBJECT TO~~ this Subpart ~~Part~~ *shall construct or modify* ~~SHALL CONSTRUCT OR MODIFY~~ the lagoon *in accordance with* ~~IN ACCORDANCE WITH~~:

1) "*Design of anaerobic lagoons for animal waste management*" ~~"DESIGN OF ANAEROBIC LAGOONS FOR ANIMAL WASTE MANAGEMENT"~~, ASAE Engineering Practice ~~403.1, as updated by 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", 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 104 of this Part ~~35 Ill. Adm. Code 506.104~~; 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 shall conduct a site investigation in 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 shall, as a part of the lagoon design, include the use of a liner and implement groundwater monitoring in 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 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 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 shall require neither a liner nor groundwater monitoring.

e) If the owner or operator determines that a liner is required for the lagoon pursuant to this Section, the design of the lagoon shall include an in-situ soil liner, borrowed clay or clay/bentonite mixture, or a synthetic liner 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 pursuant to this Section, the design of the lagoon shall include the implementation of a groundwater monitoring program in 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 shall meet or exceed the following:

1) Berm:

A) The minimum bermtop width 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 shall have side slopes not steeper than a 3 to 1 ratio of horizontal to vertical and a vegetative cover 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 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 shall be not less than the volume calculated as the summation of the following:

A) A minimum design volume, as calculated pursuant to subsection 5.4.1.1, ASAE EP403.2, ASAE Standards 1998 ~~1993~~, pp. 656-659 ~~543-545~~;
B) A livestock waste volume, which that ~~shall~~ be sufficient to store the waste generated by the facility for a period not less than 270 days as determined in accordance with ASAE EP403.2, ASAE Standards 1998 ~~1993~~, p. 656 ~~543~~;
C) Runoff and wash down volumes generated during a 270-day period including all runoff and precipitation from~~, based on a 6-inch rainfall~~

~~covering the lagoon surface and any other areas such as open~~ lots, roofs or other surfaces where collected precipitation is directed into the lagoon plus the volume of any wash down liquids utilized within the facility that ~~which~~ are also directed into the lagoon. In no case 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 pursuant to subsection 5.4.1.4, ASAE EP403.2, ASAE Standards 1998 ~~1993~~, p. 658 ~~545~~;

4) In addition to the lagoon's total design volume, a freeboard 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 shall be 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 shall be 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 shall be removed or relocated to provide for a minimum separation distance of 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] shall be 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 shall be not less than 100 feet;

7) The design and construction of the lagoon 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 shall include a mark at the liquid level elevation corresponding to the summation of the sludge volume and minimum design volume and shall be designated as the "STOP PUMPING" elevation. The liquid level board or staff gauge 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 shall be designated as the "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

~~8) Water shall be added to a newly constructed or modified lagoon to at least 60% of the design volume prior to the initial addition of waste; and~~

9) The location of the lagoon and the associated livestock management facility shall 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as the requirements of this Part. ~~[510 ILCS 77/15(a)]~~

(Source: Amended at 25 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 pursuant to Section 506.204(d) of this Part shall comply with the requirements of this Section.

b) A liner constructed using in-situ soil or borrowed clay or clay/bentonite mixtures shall meet the following standards:

1) The minimum liner thickness shall be 2 feet;

2) The liner shall be constructed in lifts not to exceed 6 inches in compacted thickness;

3) The liner shall be compacted to achieve a hydraulic conductivity equal to or less than 1×10^{-7} centimeters/second; and

4) The construction and compaction of the liner 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 shall meet the following standards:

1) The liner shall be designed to perform equivalent to or better than a liner that conforms to subsection (b) of this Section;

2) The liner manufacturer shall provide to the owner or operator the liner maintenance guidelines and shall certify that the liner is chemically compatible with:

A) The livestock waste being stored; and

B) The supporting soil materials;

3) The liner shall be supported by a compacted base free from sharp objects;

4) The liner 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 shall be made in the field according to the manufacturer's specifications. All sections 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 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 accordance with this Section 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 shall certify, pursuant to 8 Ill. Adm. Code 900.605(a), that the liner meets all the applicable requirements of this Section. Such certification shall include all supporting justification and data.

e) The owner or operator of a livestock waste lagoon shall submit to the Department a copy of the Licensed Professional Engineer's Certification prior to placing the lagoon in service in accordance with 8 Ill. Adm. Code 900.605 ~~Section 506.207 of this Part~~.

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 shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as the requirements of this Part. ~~[510 ILCS 77/15(a)]~~

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.206 Groundwater Monitoring

a) The owner or operator of any livestock waste lagoon required to implement groundwater monitoring pursuant to Section 506.204(d) of this Part shall implement a monitoring program that ~~which~~ meets the requirements of this Section and 8 Ill. Adm. Code 900.Subpart F.

b) The groundwater monitoring network shall consist of a minimum of three monitoring wells located ~~on the basis of local groundwater conditions~~ within 20 feet of the exterior toe of the berm. ~~with~~ At ~~at~~ least two of the required wells shall be located down gradient of the lagoon based on local groundwater conditions. For the purposes of groundwater monitoring network design, multiple cell lagoons shall be considered as a single lagoon.

c) The monitoring wells shall be installed in 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 shall be set at the estimated seasonal low water table elevation;

3) Monitoring wells shall utilize a minimum of a five foot screened interval; and

4) The screen shall be set in a sand pack that extends at least one foot above and one foot below the screened interval ~~of no less than five feet and no greater than seven feet~~.

d) The owner or operator shall sample the wells, analyze the samples, and report the results in accordance with the requirements of 8 Ill. Adm. Code 900.Subpart F.

~~d) Prior to placing the lagoon in service, water level measurements shall be made at each monitoring well to establish the local groundwater gradient at the lagoon site.~~

~~e) The owner or operator shall sample each monitoring well at least once prior to placing the lagoon in service and at least quarterly thereafter. Water table level elevation measurements shall be taken at each sampling event. The samples shall be collected and analyzed consistent with the methods specified in Section 506.104(a)(1) and (5) (3) of this Part for each of the following:~~

~~1) Nitrate-nitrogen;~~

~~2) Phosphate-phosphorous;~~

~~3) Chloride;~~

~~4) Sulfate;~~

~~5) Ammonia-nitrogen;~~

~~6) Escherichia coli or fecal coliform; and~~

~~7) Fecal Streptococcus.~~

~~f) The Department may collect and analyze samples or split samples from monitoring wells installed pursuant to this Section at the Departments discretion. The Department shall provide notice to the owner or operator of the livestock waste lagoon of such activity and SHALL COMPLY WITH REASONABLE ANIMAL HEALTH PROTECTION PROCEDURES AS REQUESTED BY THE OWNER OR OPERATOR. [510 ILCS 77/15(b)]~~

~~g) Analytical results as determined in subsection (e) of this Section shall be submitted to the Department within 45 days after sample collection and shall include a discussion relative to the significance of the results. Such discussion of significance shall include:~~

~~1) A comparison of the results to the initial sampling made prior to the lagoon being placed in service; and~~

~~2) A description of any proposed response action necessary to mitigate potential impacts to groundwater.~~

~~h) The Department shall review the submittal provided pursuant to subsection (g) of this Section, evaluate the proposed response action, and provide a time frame for the correction of any identified deficiencies. As a result of the evaluation, the Department may approve or modify the monitoring program or response action including, but not limited to, the following:~~

~~1) Increase or decrease the monitoring well sampling frequency;~~

~~2) Add or delete items from the list of sample analytes; or~~

~~3) Require changes to the design, construction or operation of the lagoon or changes in the operation of the livestock management facility which shall be implemented by the owner or operator within the time frame established by the Department.~~

~~i) Failure of the owner or operator to submit the information required pursuant to subsection (g) of this Section or to implement the response action approved or modified by the Department shall be considered a failure to construct a lagoon in accordance with the requirements of this Part and shall subject the owner or operator to penalties set forth in this Part and the Livestock Management Facilities Act [510 ILCS 77].~~

e) ~~j)~~ *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 shall be at least as protective of the groundwater,

surface water and the structural integrity of the livestock waste management facility as the requirements of this Part. ~~[510 ILCS 77/15(a)]~~

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.207 ~~Certification of~~ 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) ~~The portion of any lagoon~~ Any lagoon subject to the provisions of this Subpart, ~~located below the pre-construction soil surface level and~~ constructed in a karst area, 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as the requirements of this Part.

~~a) THE DEPARTMENT SHALL INSPECT AN EARTHEN LIVESTOCK WASTE LAGOON AT LEAST ONCE DURING THE PRE-CONSTRUCTION, CONSTRUCTION or POST-CONSTRUCTION PHASE and SHALL REQUIRE MODIFICATIONS WHEN NECESSARY to ensure the project will be in compliance with the requirements of this Part. [510 ILCS 77/15(b)]~~

~~b) Upon completion of construction or installation of a liner, the supervising Licensed Professional Engineer shall certify that the liner meets all the applicable requirements of Section 506.205 of this Part. Such certification shall be submitted to the Department prior to placing the lagoon in service and shall include supporting data and justification.~~

~~c) UPON COMPLETION OF THE CONSTRUCTION OR MODIFICATION, BUT PRIOR TO PLACING THE LAGOON IN SERVICE, THE OWNER OR OPERATOR OF THE LIVESTOCK WASTE LAGOON SHALL CERTIFY ON A FORM PROVIDED BY THE DEPARTMENT THAT THE LAGOON HAS BEEN CONSTRUCTED OR MODIFIED IN ACCORDANCE WITH THE STANDARDS SET FORTH IN SUBSECTION (a) OF SECTION 15 of the Livestock Management Facilities Act [510 ILCS 77] and the requirements of this Part AND THAT THE INFORMATION PROVIDED ON THE REGISTRATION FORM and other supporting documents as required by this Part IS CORRECT. THE CERTIFICATION NOTICE TO THE~~

~~DEPARTMENT SHALL INCLUDE A CERTIFICATION STATEMENT AND SIGNATURE. [510 ILCS 77/15(b)]~~

~~d) THE OWNER OR OPERATOR OF THE LAGOON MAY PROCEED TO PLACE THE LAGOON IN SERVICE NO EARLIER THAN 10 WORKING DAYS AFTER SUBMITTING TO THE DEPARTMENT A CERTIFICATION OF COMPLIANCE STATEMENT. [510 ILCS 77/15(b)]~~

(Source: Amended at 25 Ill. Reg. _____, effective _____)

Section 506.208 ~~Failure to Register or Construct in Accordance with Standards~~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 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 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 shall be at the summation of the elevation of the 100-year flood plus a freeboard. The freeboard height shall be a minimum of two feet.

c) For lagoons with unequal length and width dimensions, the lagoon shall be oriented with the longest dimension parallel to the expected direction of floodwater flow.

d) Any monitoring wells installed pursuant to Section 506.206 of this Subpart 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~a) THE OWNER OR OPERATOR OF ANY EARTHEN LIVESTOCK WASTE LAGOON SUBJECT TO REGISTRATION THAT HAS NOT BEEN REGISTERED OR CONSTRUCTED IN ACCORDANCE WITH STANDARDS SET FORTH IN SUBSECTION (a) OF SECTION 15 of the Livestock Management Facilities Act [510~~

~~ILCS 77/15] and in this Part SHALL, UPON BEING IDENTIFIED AS SUCH BY THE DEPARTMENT, BE GIVEN WRITTEN NOTICE BY THE DEPARTMENT TO REGISTER AND CERTIFY THE LAGOON WITHIN 10 WORKING DAYS after RECEIPT OF THE NOTICE. THE DEPARTMENT MAY INSPECT SUCH LAGOON AND REQUIRE COMPLIANCE IN ACCORDANCE WITH SUBSECTIONS (a) AND (b) of Section 15 of the Livestock Management Facilities Act [510 ILCS 77/15] and this Part. IF THE OWNER OR OPERATOR OF THE LIVESTOCK WASTE LAGOON THAT IS SUBJECT TO REGISTRATION FAILS TO COMPLY WITH THE NOTICE, THE DEPARTMENT MAY ISSUE A CEASE AND DESIST ORDER UNTIL SUCH TIME AS COMPLIANCE IS OBTAINED WITH THE REQUIREMENTS OF Section 15 of the Livestock Management Facilities Act [510 ILCS 77/15] and this Part. FAILURE TO CONSTRUCT THE LAGOON IN ACCORDANCE WITH THE CONSTRUCTION PLAN AND DEPARTMENT RECOMMENDATIONS IS A BUSINESS OFFENSE PUNISHABLE BY A FINE OF NOT MORE THAN $5,000. [510 ILCS 77/15(f)]~~

~~b) If the owner or operator of the livestock waste lagoon that is subject to registration fails to comply with the notice addressing violations occurring during lagoon construction, a cease and desist order to stop construction may be issued by the Department. Changes shall be made to the lagoon by the owner or operator to ensure construction according to the provisions of the Livestock Management Facilities Act [510 ILCS 77] and this Part. The cease and desist order shall be canceled by the Department upon submission of the registration materials by the lagoon owner or operator to the Department, and after the Department's review of the construction plans and specifications and lagoon registration materials, and after determination of compliance with the Livestock Management Facilities Act and this Part by the Department.~~

~~c) If the owner or operator of the livestock waste lagoon that is subject to registration fails to comply with the notice addressing violations which occur after completion of lagoon construction, an operational cease and desist order may be issued by the Department. Any necessary changes shall be made to the lagoon by the lagoon owner or operator to comply with the Livestock Management Facilities Act and this Part. The operational cease and desist order shall be canceled by the Department after the Department determines compliance with the Livestock Management Facilities Act and this Part.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.209 Lagoon Closure and Ownership Transfer (Repealed)

~~a) WHEN ANY EARTHEN LIVESTOCK WASTE LAGOON IS REMOVED FROM SERVICE, IT SHALL BE COMPLETELY EMPTIED. APPROPRIATE CLOSURE PROCEDURES SHALL BE FOLLOWED AS DETERMINED BY the requirements of this Part. [510 ILCS 77/15(e)]~~

~~1) In the event that any earthen livestock waste lagoon is removed from service, the requirements contained in Section 15(e) of the Livestock Management Facilities~~

Act [510 ILCS 77/15(e)] shall be met. The owner or operator shall notify the Department in writing when a lagoon is removed from service. Within 60 days after removal of the lagoon from service, the owner or operator shall submit a lagoon closure plan to the Department for review and approval. If no lagoon closure plan is received by the Department within 60 days, the Department shall send the lagoon owner a notice of default.

2) The lagoon closure plan shall provide for the following:

A) The sampling, analysis and reporting of results of all remaining livestock waste, sludge and minimum six-inch thickness of soil from throughout the lagoon interior consistent with the requirements of Section 506.312 of this Part;

B) The removal of all remaining livestock waste including sludge, the removal of a minimum 6 inch thickness of soil from throughout the lagoon interior, and the application of these materials to crop land at agronomic rates consistent with the provisions of the site livestock waste management plan or their otherwise proper disposal;

C) The removal of all associated appurtenances, including but not limited to transfer lines, ramps, pumping ports and other waste conveyance structures;

D) The proper management of any impounded precipitation in the remaining excavation if it is not immediately filled and the area immediately returned to its pre-construction condition;

E) The proper abandonment of any monitoring wells installed pursuant to Section 506.206 of this Part, which shall be conducted pursuant to the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120; and

F) A proposed time frame for the completion of the closure activities no greater than two years from the cessation of operation date unless the lagoon is maintained or serviced.

3) The Department shall review and approve, reject, or request additional information relative to the lagoon closure plan. THE DEPARTMENT MAY also GRANT A WAIVER TO any of THE BEFORE-STATED CLOSURE REQUIREMENTS THAT WILL PERMIT THE LAGOON TO BE USED FOR AN ALTERNATIVE PURPOSE. [510 ILCS 77/15(e)]

4) Upon completion of the lagoon closure activities as prescribed by the Department-approved closure plan, the owner or operator shall notify the Department. The Department shall conduct a site inspection and issue a written

~~notification of closure completion or inform the owner or operator of any unresolved closure issues.~~

~~b) A lagoon is considered removed from service when:~~

~~1) The Department has ordered the lagoon removed from service under Section 506.620 of this Part;~~

~~2) A tribunal of competent jurisdiction has ordered the lagoon closed or ordered the owner or operator to cease operations;~~

~~3) The lagoon no longer receives livestock waste and the lagoon is not being serviced or maintained;~~

~~4) The owner fails to extend the term for which evidence of financial responsibility is shown as required in Section 506.602(b) of this Part; or~~

~~5) The owner or operator informs the Department in accordance with subsection (a)(1) of this Section that the lagoon has been removed from service.~~

~~c) UPON A CHANGE IN THE OWNERSHIP OF A REGISTERED EARTHEN LIVESTOCK WASTE LAGOON, THE new OWNER SHALL NOTIFY, in writing, THE DEPARTMENT OF THE CHANGE WITHIN 30 WORKING DAYS OF THE CLOSING OF THE TRANSACTION. [510 ILCS 77/15(c)]~~

(Source: Repealed at 25 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 shall be so designed. [510 ILCS 77/15(a)] The following criteria shall be incorporated into the design of a system utilized for secondary containment:

a) A grass waterway constructed, installed, or utilized for the purposes of this Section shall meet or exceed the following:

1) A grass waterway 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 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 shall be established and maintained to provide adequate ground cover.

b) A filter strip constructed, installed, or utilized for the purposes of this Section shall meet or exceed the following:

1) A filter strip 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 shall be established and maintained to provide adequate ground cover.

c) A secondary berm constructed, installed, or utilized for the purposes of this Section shall meet or exceed the following:

1) The storage volume created as a result of the construction of a secondary berm 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 shall be established. The area 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 utilized for the purposes of this Section shall meet or exceed the following:

1) The terrace shall direct the livestock waste to a filter strip or grass waterway constructed or installed pursuant to the requirements of this Section; and

2) Vegetation 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water and the structural integrity of the livestock waste management facility as the requirements of this Part.

(Source: Added at 25 Ill. Reg. _____, effective _____.)

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

Section 506.301 ~~Purpose~~Applicability

The applicability of this Subpart 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, the design of which has not been approved by the Department prior to the effective date of this Part.

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, the design of which has not been approved by the Department prior to the effective date of this Part.

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

~~Livestock waste management plans shall be prepared by livestock management facility owners or operators to provide for adequate land area for the proper application of livestock waste at rates not to exceed the agronomic nitrogen DEMAND OF THE CROPS TO BE GROWN WHEN AVERAGED OVER A 5-YEAR PERIOD [510 ILCS 77/20(f)(4)].~~

(Source: Amended at 25 Ill. Reg._____, effective _____.)

Section 506.302 ~~Scope and Applicability~~Site Investigation

a) The owner or operator of a livestock waste handling facility shall conduct a site investigation in 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 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 shall be performed to determine the presence of aquifer material or karstified carbonate bedrock as follows:

1) The soil sampling 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 shall be recovered from each soil sampling; and

4) Upon completion, any boring used for sampling shall be properly abandoned and sealed 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 shall be restored by 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 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 utilize alternative information source(s). The Department shall evaluate the proposal; determine whether the alternative information source(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) 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 shall include the additional requirements of Section 506.310 of this Subpart.

f) 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 shall 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 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 shall be met:

1) The Department shall conduct a visual inspection of the surrounding area to determine the presence of natural depressions during the pre-construction site inspection as required pursuant to 8 Ill. Adm. Code 900.505(a). Construction may not occur within 400 feet of a natural depression in a karst area;

2) The owner or operator shall perform one or more soil borings that 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 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 shall be recovered from each boring;

4) The Licensed Professional Engineer, Licensed Professional Geologist, or USDA-NRCS representative designated to perform such functions 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 pursuant to subsection (g)(2) of this Section, the following requirements shall be met:

A) The Department may require additional borings to determine the extent of the void;

B) Notwithstanding the other requirements of this Subpart, the owner or operator shall submit to the Department a plan for the design of the facility that shall include the additional design requirements set forth in Section 506.312 of this Part and shall include any additional design requirements deemed necessary by the Licensed Professional Engineer; and

C) The Department shall review and approve the plan required pursuant to subsection (g)(4)(B) of this Section prior to construction. The Department may also require additional design criteria before the plan is approved and construction may begin.

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

5) Upon completion of the boring(s) required pursuant to subsection (g) of this Section, the boring(s) shall be properly abandoned and sealed pursuant to the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120.

h) The site investigation in accordance with subsections (b), (c), (d), (e), (f), and (g) of this Section 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.

~~a) A waste management plan shall be prepared according to the requirements contained in Section 20 of the Livestock Management Facilities Act [510 ILCS 77/20] and in this Subpart. THE APPLICATION OF LIVESTOCK WASTE TO THE LAND IS AN ACCEPTABLE, RECOMMENDED, AND ESTABLISHED PRACTICE IN ILLINOIS. HOWEVER, WHEN LIVESTOCK WASTE IS NOT APPLIED IN A RESPONSIBLE MANNER, IT MAY CREATE POLLUTIONAL PROBLEMS. IT SHOULD BE RECOGNIZED THAT, IN MOST CASES, IF THE AGRONOMIC NITROGEN RATE IS MET, THE PHOSPHORUS APPLIED WILL EXCEED THE CROP REQUIREMENTS, BUT NOT ALL OF THE PHOSPHORUS MAY BE AVAILABLE FOR USE BY THE CROP. IT WILL BE CONSIDERED ACCEPTABLE, THEREFORE, TO PREPARE AND IMPLEMENT A WASTE MANAGEMENT PLAN BASED ON THE NITROGEN RATE. [510 ILCS 77/20(f)]~~

~~b) THE LIVESTOCK MANAGEMENT FACILITY OWNER OR OPERATOR AT A FACILITY OF LESS THAN 1,000 ANIMAL UNITS SHALL NOT BE REQUIRED TO PREPARE AND MAINTAIN A WASTE MANAGEMENT PLAN. [510 ILCS 77/20(b)]~~

~~c) THE LIVESTOCK MANAGEMENT FACILITY OWNER OR OPERATOR AT A FACILITY OF 1,000 OR GREATER ANIMAL UNITS BUT LESS THAN 7,000 ANIMAL UNITS SHALL PREPARE, maintain and implement a waste management plan and comply with the following: [510 ILCS 77/20(c)]~~

~~1) For facilities which commence operations or reach or exceed 1,000 animal units after the effective date of this Part, the owner or operator shall prepare, maintain, and implement a waste management plan within 60 working days after commencing operations or exceeding 1,000 animal units;~~

~~2) Prior to the expiration of the waste management plan preparation period, the owner or operator shall submit to the Department a form certifying that a waste management plan has been prepared. The form shall also list the location of the plan;~~

~~3) The waste management plan and records of livestock waste disposal shall be kept on file at the facility for a period of three years and shall be available for inspection by Department personnel during normal business hours; and~~

4) NOTWITHSTANDING the above provisions, A LIVESTOCK MANAGEMENT FACILITY SUBJECT TO THIS SUBSECTION (e) MAY BE OPERATED ON AN INTERIM BASIS BUT NOT TO EXCEED 6 MONTHS AFTER THE EFFECTIVE DATE OF this Part TO ALLOW FOR THE OWNER OR OPERATOR OF THE FACILITY TO DEVELOP A WASTE MANAGEMENT PLAN. [510 ILCS 77/20(e)]

d) THE LIVESTOCK MANAGEMENT FACILITY OWNER OR OPERATOR AT A FACILITY OF 7,000 OR GREATER ANIMAL UNITS SHALL PREPARE, MAINTAIN, implement, AND SUBMIT TO THE DEPARTMENT THE WASTE MANAGEMENT PLAN FOR APPROVAL [510 ILCS 77/20(d)] and comply with the following:

1) For facilities which commence operations after the effective date of this Part, the owner or operator shall submit a waste management plan to the Department. The facility shall not commence operation before the Department approves the plan;

2) For existing facilities that reach or exceed 7,000 animal units through expansion, the owner or operator shall submit to the Department a waste management plan within 60 working days after reaching or exceeding 7,000 animal units for approval by the Department; and

3) The waste management plan and records of livestock waste disposal shall be kept on file at the facility for a period of three years and shall be available for inspection by Department personnel during normal business hours.

e) A separate waste management plan shall be developed for each livestock waste handling facility. Livestock waste from each different type of livestock waste storage structure or system shall be accounted for in separate waste management plans or as separate sections of one plan. Waste from different types of storage structures may be applied to the same land provided that the nitrogen rate to obtain targeted crop yield goals is not exceeded.

f) Notwithstanding the above provisions, a facility owner or operator who prepared a waste management plan pursuant to the emergency amendment adopted in R97-14 at 20 Ill. Reg. 14903, effective October 31, 1996 and the emergency rules adopted in R97-14 at 21 Ill. Reg. 4313, effective March 31, 1997, shall be deemed to have prepared a waste management plan pursuant to this Subpart.

g) For the purposes of this Subpart, the number of animal units served by a livestock waste handling facility shall be determined as the maximum design capacity of the livestock management facility which is being served by the livestock waste handling facility.

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.303 ~~Waste Management Plan Contents~~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 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 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; ~~based on a 6 inch rainfall covering the storage structure surface and any other areas where precipitation is directed into the storage structure;~~

2) The volume of all wash down liquid generated during the 150-day period that is directed into the livestock waste handling facility ~~Additional wash down liquid volumes~~; 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 pursuant to this Section 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 pursuant to subsection (a) of this Section shall include a liquid level board or staff gauge. The liquid level board or staff gauge shall include a mark corresponding to the summation of the livestock waste volume and the additional wash down volume pursuant to subsection (a) of this Section, and shall be designated as the "START PUMPING" elevation.

~~The Livestock Waste Management Plan shall contain the following items:~~

~~a) Name, address, and phone number of the owner(s) of the livestock facility;~~

~~b) Name, address, and phone number of the manager or operator if different than the owner(s);~~

c) Address, phone number, and plat location of the facility, and directions from nearest post office;

d) Type of waste storage for the facility;

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

f) Aerial photos and maps outlining fields available and intended for livestock waste applications with available acreage listed and with residences, non-farm businesses, common places of assembly, streams, wells, waterways, lakes, ponds, rivers, drainage ditches, and other water sources indicated;

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

h) AN ESTIMATE OF THE VOLUME OF WASTE TO BE DISPOSED OF ANNUALLY [510 ILCS 77/20(f)(1)];

i) Cropping schedule for each field for the past year, anticipated crops for the current year, and anticipated crops for the next two years after the current year;

j) Targeted crop yield goal for each crop in each field;

k) Estimated nutrient content of the livestock waste;

l) Livestock waste application methods;

m) Calculations showing the following:

1) Amount of available livestock waste for application;

2) Amount of nitrogen available for application;

3) Nitrogen loss due to method of application;

4) Amount of plant-available nitrogen including mineralization of organic nitrogen;

5) Amount of nitrogen required by each crop in each field based on targeted crop yield goal;

6) Nitrogen credits from previous crops, from other sources of fertilizer applied for the growing season, and from any manure applications during the previous three years for each application field;

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

8) Land area required for application;

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

o) A PROVISION THAT LIVESTOCK WASTE APPLIED WITHIN 1/4 MILE OF ANY RESIDENCE NOT PART OF THE FACILITY SHALL BE INJECTED OR INCORPORATED ON THE DAY OF APPLICATION. HOWEVER, LIVESTOCK MANAGEMENT FACILITIES AND LIVESTOCK WASTE HANDLING FACILITIES THAT HAVE IRRIGATION SYSTEMS IN OPERATION PRIOR TO May 21, 1996, OR EXISTING FACILITIES APPLYING WASTE ON FROZEN GROUND ARE NOT SUBJECT TO THE PROVISIONS OF THIS subsection (o) [510 ILCS 77/20(f)(5)];

p) A PROVISION THAT LIVESTOCK WASTE MAY NOT BE APPLIED WITHIN 200 FEET OF SURFACE WATER UNLESS THE WATER IS UPGRADE OR THERE IS ADEQUATE DIKING AND WASTE WILL NOT BE APPLIED WITHIN 150 FEET OF POTABLE WATER SUPPLY WELLS [510 ILCS 77/20(f)(6)];

q) PROVISION THAT LIVESTOCK WASTE MAY NOT BE APPLIED IN A 10-YEAR FLOOD PLAIN UNLESS THE INJECTION OR INCORPORATION METHOD OF APPLICATION IS USED [510 ILCS 77/20(f)(7)];

r) A PROVISION THAT LIVESTOCK WASTE MAY NOT BE APPLIED IN WATERWAYS. For the purposes of this Part, a grassed area serving as a waterway may receive livestock waste through an irrigation system if there is no runoff, the distance from applied livestock waste to surface water is greater than 200 feet, the distance from applied livestock waste to potable water supply wells is greater than 150 feet; the distance from applied livestock waste to a non-potable well, an abandoned or plugged well, a drainage well, or an injection well is greater than 100 feet; and precipitation is not expected within 24 hours [510 ILCS 77/20(f)(8)];

s) A PROVISION THAT IF WASTE IS SPREAD ON FROZEN OR SNOW-COVERED LAND, THE APPLICATION WILL BE LIMITED TO LAND AREAS ON WHICH:

1) LAND SLOPES ARE 5% OR LESS; OR

2) ADEQUATE EROSION CONTROL PRACTICES EXIST [510 ILCS 77/20(f)(9)];

t) For livestock facilities utilizing an earthen lagoon or other earthen waste storage structure, a provision that the owner, operator, or certified livestock manager shall inspect all berm tops, exterior berm sides, and non-submerged interior berm sides for evidence of erosion, burrowing animal activity, and other indications of berm degradation on a frequency of not less than once every two weeks; and

~~u) A provision that livestock waste may not be applied during a rainfall or to saturated soil and that conservative waste loading rates will be used in the case of a high water table or shallow earth cover to fractured bedrock. Caution should be exercised in applying livestock wastes, particularly on porous soils, so as not to cause nitrate or bacteria contamination of groundwaters.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.304 ~~Livestock Waste Volumes~~General Design and Construction Standards

a) Livestock waste handling facilities 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 shall be constructed or installed to achieve a hydraulic conductivity equal to or less than 1×10^{-7} centimeters per second.

2) Storage and transport surfaces constructed of concrete and intended to come into contact with livestock waste shall be constructed or installed to achieve a hydraulic conductivity equal to or less than 1×10^{-6} centimeters per second.

3) 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 which is in dry or solid form shall be constructed or installed to achieve a hydraulic conductivity equal to or less than 1×10^{-6} centimeters per second.

4) The livestock waste handling facility shall withstand, at a minimum, the following loads:

A) Lateral loads due to soil and equipment, which 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 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 shall be chemically compatible with the livestock waste being handled and stored and the supporting soil materials.

6) The livestock waste handling facility 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 shall be removed or relocated to provide for a minimum separation distance of 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], shall be 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 shall be not less than 100 feet.

9) The design and construction of livestock waste handling facilities 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 shall be designed and constructed pursuant to the following:

1) Concrete livestock waste storage tanks shall be designed and constructed in 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, shall be designed and constructed in 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, shall be designed and constructed in 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, shall be designed and constructed in

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 shall be designed and constructed in 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 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 ~~adjacent to the foundation at an elevation of one foot~~ below the bottom of the footings ~~to permanently lower the water table.~~

2) The tubing 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 accordance with the requirements of Subpart E of 8 Ill. Adm. Code 900.

4) The owner or operator shall take necessary measures to divert the discharge from the drainage tubing, away from surface water, if monitoring results pursuant subsection (c)(3) of this Section indicate that the tubing is discharging livestock waste. Such measures 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 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~The volume of available livestock waste for application, as required in Section 506.303(m)(1) of this Part, shall be determined from site specific measurements of the waste storage structure. Calculations and a description of the volume determination shall be included in the waste management plan.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.305 ~~Nutrient Content of Livestock Waste~~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 shall meet the following requirements:

1) Construction joints shall be incorporated into the concrete in 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 shall be incorporated into construction joints in 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 shall be in 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 shall be in 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~a) For new facilities without a waste management plan or facilities where a waste management plan is being initially prepared pursuant to this Part, the owner or operator shall obtain the nitrogen content of the livestock waste, as required in Section 506.303(m)(2) of this Part, from the results of a laboratory analysis of livestock waste samples from the waste storage facility, or from estimated values provided by the University of Illinois Cooperative Extension Service or the Natural Resources Conservation Service of the United States Department of Agriculture.~~

~~b) The livestock waste handling facility owner or operator shall annually obtain a laboratory analysis of the nutrient content of the livestock waste to be applied to land as provided within the waste management plan. Livestock waste shall be sampled during the application process. Multiple subsamples shall be obtained and may be combined into~~

~~one sample for analysis so that a representative sample is used for preparation of the waste management plan. A sample taken during waste application the previous year can be used as a representative sample of the waste to be applied the following year unless there has been a change in the waste management practices.~~

~~c) Livestock waste sampling shall be performed under the direction of a certified livestock manager to ensure a representative sample from the livestock waste storage facility and to preserve the integrity of the sample.~~

~~d) The laboratory analysis of the livestock waste sample shall include, but not be limited to, total nitrogen, ammonium nitrogen, total phosphorus, and total potassium. Results of the analysis shall be included in the waste management plan.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.306 ~~Adjustments to Nitrogen Availability~~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 shall meet the following requirements:

1) All metal surfaces shall be protected by a corrosion resistance system;

2) Concrete footings and bases 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 shall be minimized; and

4) Metal components of livestock waste handling facilities 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~Adjustments shall be made to nitrogen availability to account for nitrogen loss from livestock waste due to method of application, as required in Section 506.303 (m) (3), and to account for the conversion of organic nitrogen into a plant available form, as required in Section 506.303 (m) (4) of this Part.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.307 ~~Targeted Crop Yield Goal~~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 shall meet the following requirements:

1) The construction and compaction of the earthen component 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 shall be 8 feet; and

3) Walls incorporated into the design of an earthen component 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 utilize an earthen base shall be constructed to achieve a hydraulic conductivity of equal to or less than 1 x 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~a) The targeted crop yield goal, as required in Section 506.303(m)(5) of this Part, shall be determined for each field where the livestock waste is to be applied. The targeted crop yield goal shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The following listing of sources of data shall be utilized to determine the targeted crop yield goal.~~

~~1) Proven yields. The proven yield shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The owner or operator shall indicate the method used to determine the proven yield. Data from years with crop disasters may be discarded. Proven yields shall be used unless there is a sound agronomic basis for predicting a different targeted crop yield goal;~~

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

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

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

(Source: Amended at 25 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 shall meet the following requirements:

1) The synthetic material shall be supported by a compacted base free from sharp objects;

2) The use of field seams shall be minimized. All field seams 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 shall be resistant to or otherwise protected from damage from construction or operation and degradation by ultraviolet light;

4) Synthetic components shall be designed for use in livestock waste handling facilities and shall be installed according to the manufacturer's specifications and guidelines;

5) The liner shall be chemically compatible with the livestock waste being handled and stored and the supporting soil materials; and

6) The liner 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

(Source: Added at 25 Ill. Reg. _____, effective _____.)

Section 506.309 ~~Nitrogen Credits~~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 shall meet the following requirements:

1) Wooden materials shall be naturally resistant or treated to resist damage from decay and corrosion; and

2) Construction fasteners 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~a) Nitrogen credits shall be calculated by the livestock facility owner or operator, pursuant to Section 506.303(m)(6) of this Part, for nitrogen-producing crops grown the previous year, for other sources of nitrogen applied for the growing season, and for mineralized organic nitrogen in livestock waste applied during the previous three years.~~

~~b) Nitrogen credits shall be calculated by the livestock facility 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.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.310 ~~Records of Waste Disposal~~ 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 shall comply with the requirements of this Section.

b) Livestock waste handling facility components constructed of concrete shall ensure that concrete footings extend below the maximum frost depth. ~~meet the following requirements:~~

~~1) The minimum thickness of floors shall be 5 inches;~~

~~2) The minimum thickness of exterior walls shall be 8 inches; and~~

~~3) Footings shall extend below the maximum frost depth.~~

c) Livestock waste handling facility components constructed of earthen materials shall include the installation of an earthen or synthetic liner.

1) Earthen liners shall meet the following requirements:

A) The liner shall consist of in-situ soil, borrowed clay, or clay/bentonite mixtures;

B) The minimum liner thickness shall be 2 feet; and

C) The liner shall be constructed in lifts not to exceed 6 inches in compacted thickness.

D) The construction and compaction of the liner 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 shall meet the design and construction requirements set forth in Section 506.308 of this Subpart and shall have a minimum thickness of 40 mil.

3) The design, construction, and installation of the liner required pursuant to this Section 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 shall certify that the liner meets all the applicable requirements of this Section. Such certification shall include all supporting justification and data.

4) The owner or operator of the livestock waste handling facility shall submit to the Department a copy of the Licensed Professional Engineer's liner certification prior to placing the livestock waste handling facility in service in accordance with 8 Ill. Adm. Code 900.506(a).

~~d) In-ground livestock waste handling facilities shall include perimeter drainage tubing installed one foot below the bottom of the footings of the structure. The tubing shall drain freely to a surface water outlet or other subsurface drainage outlet and shall include a sampling port. The owner or operator shall sample the sampling port, analyze the samples, and report the results in accordance with the requirements of 8 Ill. Adm. Code 900.Subpart E.~~

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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the

structural integrity of the livestock waste handling facility as the requirements of this Part.

~~Records of the livestock waste disposal shall include the following items:~~

~~a) Date of livestock waste application;~~

~~b) The field where livestock waste application was made;~~

~~c) Method of livestock waste application;~~

~~d) Livestock waste application rate;~~

~~e) Number of acres receiving waste; and~~

~~f) Amount of livestock waste applied.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.311 ~~Approval of Waste Management Plans~~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)] *notwithstanding the* other requirements of this Subpart or 8 Ill. Adm. Code 900, the following criteria 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 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 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 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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

~~a) Department approval of livestock waste management plans shall be based on the following criteria:~~

~~1) Livestock waste application rate of nitrogen not to exceed the crop nitrogen requirements for targeted crop yield goals;~~

~~2) Demonstration of adequate land area for livestock waste application based on Section 506.303 of this Part; and~~

~~3) Completeness and accuracy of plan contents as specified in Section 506.303 of this Part.~~

~~b) The owner or operator of the livestock management facility shall be notified by the Department within 30 working days after receipt of the livestock waste management plan that the plan has been approved or that further information or changes are needed. The owner or operator shall provide the information or changes within 30 working days.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.312 ~~Sludge Removal~~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) ~~The portion of~~ Any livestock waste handling facility ~~located below the pre-construction soil surface level and~~ constructed in a karst area shall be designed and constructed utilizing a rigid material such as concrete or steel.

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 shall demonstrate that such modification shall be at least as protective of the groundwater, surface water, and the structural integrity of the livestock waste handling facility as the requirements of this Part.

a) ~~Within 60 days prior to periodic removal of sludge from a livestock waste storage structure, the livestock facility owner or operator shall test the sludge for nutrient content pursuant to Section 506.305(c) and (d) of this Subpart. Application of the sludge to the land shall not exceed the nitrogen requirement to obtain targeted yields of the crop to be grown.~~

b) ~~Prior to the removal of the remaining livestock waste, soil, and sludge during a lagoon closure, the waste, soil, and sludge shall be tested for nutrient content pursuant to Section 506.305(c) and (d) of this Subpart. Application of the waste, soil, and sludge to the land shall not exceed the nitrogen requirement to obtain targeted yields of the crop to be grown.~~

c) ~~Nitrogen requirements based on targeted yields for the crop to be grown may be met but shall not be exceeded by any combination of the following:~~

1) ~~Livestock waste applications;~~

2) ~~Periodic sludge applications; or~~

3) ~~Remaining livestock waste, soil, or sludge applications during a waste storage structure closure.~~

(Source: Amended at 25 Ill. Reg. _____, effective _____.)

Section 506.313 Plan Updates (Repealed)

a) ~~The waste management plan shall be reviewed annually by the livestock facility owner or operator and updated, if necessary, after receipt by the owner or operator of the nutrient content results from the laboratory analysis of the livestock waste as required in Section 506.305(b), (c), and (d) of this Subpart, but prior to the next application period of the livestock waste to the land.~~

b) ~~The waste management plan shall also be updated when at least one of the following occurs:~~

1) ~~A change in the amount of land area needed to dispose of the livestock waste based upon a change in the waste volume to be disposed of, nitrogen content of the livestock waste, or other factors;~~

2) ~~A change in land that is available for livestock waste application if the land is not currently included in the waste management plan;~~

3) ~~Method of livestock waste disposal or application changes; or~~

4) ~~Cropping sequence changes which alter the amount of livestock waste to be applied.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.314 Penalties (Repealed)

~~a) ANY PERSON WHO IS REQUIRED TO PREPARE, MAINTAIN, and implement A WASTE MANAGEMENT PLAN AND WHO FAILS TO DO SO SHALL BE ISSUED A WARNING LETTER BY THE DEPARTMENT FOR THE FIRST VIOLATION AND SHALL BE GIVEN 30 WORKING DAYS TO PREPARE A WASTE MANAGEMENT PLAN. FOR FAILURE TO PREPARE, MAINTAIN, and implement A WASTE MANAGEMENT PLAN, THE PERSON SHALL BE FINED AN ADMINISTRATIVE PENALTY OF UP TO $500 BY THE DEPARTMENT AND SHALL BE REQUIRED TO ENTER INTO AN AGREEMENT OF COMPLIANCE TO PREPARE, MAINTAIN, and implement A WASTE MANAGEMENT PLAN WITHIN 30 WORKING DAYS. FOR FAILURE TO PREPARE, MAINTAIN, and implement A WASTE MANAGEMENT PLAN AFTER THE SECOND 30 DAY PERIOD OR FOR FAILURE TO ENTER INTO A COMPLIANCE AGREEMENT, THE DEPARTMENT MAY ISSUE AN OPERATIONAL CEASE AND DESIST ORDER UNTIL COMPLIANCE IS ATTAINED. [510 ILCS 77/20(g)]~~

~~b) The operational cease and desist order procedures may be suspended by the Department upon submittal of a waste management plan by the owner or operator to the Department. The cease and desist order shall be canceled by the Department upon approval of the waste management plan by the Department.~~

~~c) A waste management plan prepared as a result of a warning letter or compliance agreement shall be subject to approval by the Department.~~

~~d) Penalties shall not be imposed for excessive nitrogen application for unplanned cropping changes due to weather or other unforeseeable circumstances.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

SUBPART D: CERTIFIED LIVESTOCK MANAGER

Section 506.401 Applicability (Repealed)

~~a) A LIVESTOCK WASTE HANDLING FACILITY SERVING 300 OR GREATER ANIMAL UNITS SHALL BE OPERATED ONLY UNDER THE SUPERVISION OF A CERTIFIED LIVESTOCK MANAGER. NOT WITHSTANDING THE BEFORE-STATED PROVISION, A LIVESTOCK WASTE HANDLING FACILITY MAY BE OPERATED ON AN INTERIM BASIS, BUT NOT TO EXCEED 6 MONTHS, TO ALLOW FOR THE OWNER OR OPERATOR OF THE FACILITY TO BECOME CERTIFIED. For the purposes of this Subpart, being operated under the supervision of a~~

~~certified livestock manager shall mean that the certified livestock manager shall be immediately available to the workers at a livestock waste handling facility either in person or via telecommunications and shall have the ability to be physically present at the livestock waste handling facility within one hour after notification. [510 ILCS 77/30(a)]~~

~~b) Persons may become certified livestock managers by demonstrating an understanding of and competence for the operation of livestock waste handling facilities as established in Section 30 of the Livestock Management Facilities Act [510 ILCS 77] and further described in this Subpart. Livestock managers shall establish or re-establish certification when required to do so in accordance with Section 30 of the Livestock Management Facilities Act.~~

~~c) A livestock manager certified pursuant to the emergency amendment adopted in R97-14 at 20 Ill. Reg. 14903, effective October 31, 1996 and the emergency rules adopted in R97-14 at 21 Ill. Reg. 4313, effective March 31, 1997, shall be considered as certified pursuant to this Subpart.~~

~~d) For the purposes of this Subpart, the number of animal units served by a livestock waste handling facility is the maximum design capacity of the livestock management facility which is being served by the livestock waste handling facility.~~

~~e) For violations pertaining to the certified livestock manager requirements, the owner or operator SHALL BE ISSUED A WARNING LETTER FOR THE FIRST VIOLATION AND SHALL BE REQUIRED TO HAVE A CERTIFIED MANAGER FOR THE LIVESTOCK WASTE HANDLING FACILITY WITHIN 30 WORKING DAYS. FOR FAILURE TO COMPLY WITH THE WARNING LETTER WITHIN THE 30 DAY PERIOD, THE PERSON SHALL BE FINED AN ADMINISTRATIVE PENALTY OF UP TO $500 BY THE DEPARTMENT AND SHALL BE REQUIRED TO ENTER INTO AN AGREEMENT TO HAVE A CERTIFIED MANAGER FOR THE LIVESTOCK WASTE HANDLING FACILITY WITHIN 30 WORKING DAYS. FOR FAILURE TO COMPLY WITH THE AGREEMENT TO HAVE A CERTIFIED MANAGER FOR THE LIVESTOCK WASTE HANDLING FACILITY WITHIN THE 30 DAY PERIOD OR FOR FAILURE TO ENTER INTO A COMPLIANCE AGREEMENT, THE PERSON SHALL BE FINED UP TO $1,000 BY THE DEPARTMENT AND SHALL BE REQUIRED TO ENTER INTO AN AGREEMENT TO HAVE A CERTIFIED MANAGER FOR THE LIVESTOCK WASTE HANDLING FACILITY WITHIN 30 WORKING DAYS. FOR CONTINUED FAILURE TO COMPLY, THE DEPARTMENT MAY ISSUE AN OPERATIONAL CEASE AND DESIST ORDER UNTIL COMPLIANCE IS ATTAINED. [510 ILCS 77/30(g)] The cease and desist order shall be canceled by the Department upon presentation to the Department of a valid certified livestock manager certificate issued in the name of the owner, operator, or current employee of the livestock facility.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

SUBPART E: PENALTIES

Section 506.501 General (Repealed)

~~The penalties for violations of the Livestock Management Facilities Act [510 ILCS 77] and this Part shall be those as identified in the Livestock Management Facilities Act and further described in this Part and Subpart. Warning letters and written notices from the Department shall be sent via certified mail to the livestock facility owner or operator.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

SUBPART F: FINANCIAL RESPONSIBILITY

Section 506.601 Scope, Applicability, and Definitions (Repealed)

~~a) This Subpart provides procedures by which the owner of a new or modified livestock waste lagoon registered under the Livestock Management Facilities Act provides evidence of financial responsibility satisfying the requirements of Section 17 of the Livestock Management Facilities Act.~~

~~b) Owners of lagoons must comply with the financial responsibility requirements of this Part either:~~

~~1) on or before June 1, 1999; or~~

~~2) before the lagoon is placed in service.~~

~~c) For the purposes of this Subpart, the following terms have the following meanings:~~

~~1) "Financial institution" means:~~

~~A) An insurer providing commercial or private insurance to evidence financial responsibility for lagoon closure in accordance with Section 506.610 of this Part;~~

~~B) A guarantor providing a guarantee as evidence of financial responsibility for lagoon closure in accordance with Section 506.611 of this Part;~~

~~C) The issuer of a surety bond as evidence of financial responsibility for lagoon closure in accordance with Section 506.612 of this Part;~~

~~D) The issuer of a letter of credit as evidence of financial responsibility for lagoon closure in accordance with Section 506.613 of this Part; or~~

~~E) The livestock waste lagoon closure fund managed by the Illinois Farm Development Authority that evidences financial responsibility for lagoon closure in accordance with Section 506.615 of this Part.~~

~~2) "Level of surety" means the level, calculated in accordance with Section 506.603 of this Part, at which evidence of financial responsibility must be provided.~~

~~3) "Surety instrument" means any of the devices listed in Section 506.602 of this Part by which a lagoon owner evidences financial responsibility for lagoon closure. Unless the context requires otherwise, "surety instrument" includes a combination of surety instruments.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.602 Mechanisms for Providing Evidence of Financial Responsibility (Repealed)

~~a) FINANCIAL RESPONSIBILITY MAY BE EVIDENCED BY ANY COMBINATION OF THE FOLLOWING:~~

~~1) COMMERCIAL OR PRIVATE INSURANCE;~~

~~2) GUARANTEE;~~

~~3) SURETY BOND;~~

~~4) LETTER OF CREDIT;~~

~~5) CERTIFICATE OF DEPOSIT OR DESIGNATED SAVINGS ACCOUNT; or~~

~~6) PARTICIPATION IN A LIVESTOCK WASTE LAGOON CLOSURE FUND MANAGED BY THE ILLINOIS FARM DEVELOPMENT AUTHORITY. [510 ILCS 77/17]~~

~~b) The lagoon owner must provide continuous coverage from the time the lagoon is placed in service until such time as the owner is released from the financial responsibility requirements pursuant to Section 506.605(a) of this part. The initial term of any surety instrument (other than a certificate of deposit or designated savings account) utilized to fulfill the requirements of this Part must be at least three years. At least two years prior to the expiration date of such instrument, the owner must provide the Department with proof that the term of coverage has been extended for at least one additional year.~~

~~c) Upon a change in the ownership of a livestock management facility or livestock waste handling facility involving a lagoon that is subject to the financial responsibility requirements of this Subpart, the new owner must establish and maintain evidence of financial responsibility at the same level of surety as the previous owner.~~

d) The lagoon owner must ensure that the terms and conditions of the surety instrument(s) listed in subsection (a) of this Section upon which the owner relies are legally valid, binding, and enforceable under State and federal law.

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.603 Level of Surety (Repealed)

a) The level of surety is determined by the following formula:

Level of Surety = (V x CF) + EC

where:

V = Volume of the lagoon as constructed or modified in cubic feet, including the freeboard volume;

CF = Cost factor determined pursuant to subsection (b) of this Section; and

EC = Engineering contingency determined under subsection (e) of this Section.

b) The cost factor is obtained from the following:

1) Until December 31, 2002, the cost factor is 10¢ per cubic foot of lagoon volume.

2) After January 1, 2003 through December 31, 2007, the cost factor is 12¢ per cubic foot of lagoon volume.

3) After January 1, 2008, the cost factor is 15¢ per cubic foot of lagoon volume.

e) The engineering contingency is equal to 10% of (V x CF).
(Source: Amended at 22 Ill. Reg. 20605, effective November 12, 1998.)

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.604 Upgrading Surety Instrument (Repealed)

a) The owner of a lagoon must increase the total amount of surety in place so as to equal the level of surety as calculated within 90 days after:

1) a modification resulting in an increase in the volume of the lagoon; or

~~2) an increase in the cost factor under Section 506.603(b) of this Part.~~

~~b) If modification of a lagoon results in a decrease in volumetric capacity, the owner or operator may provide the Department with documentation of the reduction in volumetric capacity and request a recalculation of the level of surety. Within 90 days after a request by the owner or operator under this subsection, the Department must either:~~

~~1) release any surety amount above the level of surety as recalculated based upon the owner's documentation of reduction of volumetric capacity; or~~

~~2) conduct an inspection and determine the amount by which volumetric capacity has been decreased.~~

~~c) If the Department conducts an inspection under subsection (b), then the Department must release any surety amount above the level of surety as recalculated based upon the results of the inspection.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.605 Release of Lagoon Owner and Financial Institution (Repealed)

~~a) The Department must release a lagoon owner from the requirements of this Subpart when:~~

~~1) The lagoon has been properly closed and a notification of closure completion pursuant to Section 506.209 of this Part has been issued to the lagoon owner by the Department; or~~

~~2) A waiver has been granted by the Department to the lagoon owner allowing the lagoon to be used for an alternative purpose; or~~

~~3) Title of the property containing the lagoon has been transferred to a new owner and the new owner has posted financial assurance as required under Section 506.602(c) of this Part.~~

~~b) The Department must release a financial institution when:~~

~~1) A lagoon owner offers an authorized alternative surety that meets the requirements of Section 506.607(c) of this Part; or~~

~~2) The Department releases the lagoon owner from the requirements of this Subpart under subsection (a) of this Section.~~

~~c) The Department must notify the lagoon owner and financial institution in writing within 60 days after a release under this Section. If a release is based upon proper closure of a~~

~~lagoon, notification under this subsection should occur at the same time as notice of proper closure under Section 506.209(a)(4).~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.606 Financial Responsibility Proceeds (Repealed)

~~a) A financial institution issuing a surety instrument evidencing financial responsibility for closure of a livestock waste lagoon becomes liable on the surety instrument when a lagoon is removed from service and:~~

~~1) The owner fails to submit the lagoon closure plan required by Section 506.209 of this Part and:~~

~~A) cannot be found; or~~

~~B) fails to cure such failure within 30 days after notice from the Department;~~

~~2) The owner fails to obtain Department approval of a lagoon closure plan within eight months after the date that the lagoon is removed from service, unless the lagoon is maintained or serviced; or~~

~~3) The owner fails to comply with an approved lagoon closure plan and:~~

~~A) cannot be found; or~~

~~B) fails to cure such noncompliance within 30 days after notice from the Department.~~

~~b) The Department must provide notice to the financial institution providing surety for the lagoon:~~

~~1) when it determines that the lagoon has been removed from service; and~~

~~2) when it determines that one of the criteria for liability set forth in subsection (a) of this Section has been met.~~

~~c) Within 30 days after notice of liability from the Department, the financial institution must either assume liability for closure of the lagoon and notify the Department of its election to assume liability, or deposit the amount for which it is liable in connection with the lagoon into an account from which the Department is authorized to disburse funds for the purpose of closing the lagoon.~~

~~1) If the financial institution assumes liability for closure of the lagoon, it must submit a lagoon closure plan that meets the requirements of Section 506.209 of this Part within 60 days after notifying the Department of its election.~~

~~Notwithstanding the financial institution's assumption of liability for closure of the lagoon, the Department may require the financial institution to deposit funds up to the amount for which the financial institution is liable under the surety instrument into an account from which the Department is authorized to disburse funds for the purpose of closing the lagoon if:~~

~~A) The financial institution does not submit the lagoon closure plan as required and fails to cure such omission within 30 days after notice from the Department;~~

~~B) The financial institution fails to obtain Department approval of a lagoon closure plan within eight months after the date that it elects to assume liability for closure of the lagoon, unless the lagoon is maintained or serviced; or~~

~~C) The financial institution fails to comply with an approved lagoon closure plan and fails to cure such noncompliance within 30 days after notice from the Department.~~

~~2) A financial institution that assumes liability for closure of a lagoon under this Section remains liable for the full amount of the surety instrument until the Department issues written notification of completion of closure in accordance with Section 506.209, notwithstanding the expiration of the instrument utilized to evidence financial responsibility by the owner.~~

~~3) Any amounts that a financial institution may expend for service or maintenance of the lagoon pending closure or partial closure of the lagoon do not reduce the amount of the financial institution's obligation under this subsection (e).~~

~~4) If the financial institution elects, or is required under subsection (e)(1) of this Section, to deposit the funds required by the Department into an account from which the Department is authorized to disburse funds for the purpose of closing the lagoon, then the Department shall close the lagoon within the time frame established under Section 15(e) of the LMFA or as soon as practicable, to the extent possible utilizing the funds deposited by the financial institution. The Department may use any interest earned on deposited funds to close the lagoon. The Department must release any funds remaining in the account, including any remaining interest earned on funds in the account, to the financial institution upon completion of closure.~~

~~d) The Department may sue in any court of competent jurisdiction to enforce its rights under any surety instrument.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.607 Use of Multiple Surety Instruments (Repealed)

~~a) The lagoon owner may use any combination of the surety instruments listed in Section 17 of the Livestock Management Facilities Act [510 ILCS 77/17] and this Subpart to evidence the required level of financial responsibility.~~

~~b) A lagoon owner is not limited to maintaining financial responsibility with the original surety instrument or combination of instruments. The owner must notify the Department before making any change in surety instruments.~~

~~c) If a lagoon owner makes any change in surety instruments, the lagoon owner must maintain the total financial responsibility for the lagoon at a level not less (without counting the amounts to be released) than the level of surety.~~

~~d) A replacement surety instrument or instruments must provide evidence of financial responsibility for a period at least equal to the existing instrument or instruments. This provision does not relieve an owner of the obligation under Section 506.602(b) to provide proof at least two years prior to expiration of a surety instrument that the term for which financial responsibility has been demonstrated has been extended for at least an additional year.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.608 Use of a Single Surety Instrument for Multiple Lagoons (Repealed)

~~a) An owner may use a surety instrument specified in this Subpart to provide evidence of financial responsibility for more than one lagoon.~~

~~b) Whenever a single surety instrument is used for multiple lagoons, the owner must submit an itemization to the Department identifying all lagoons covered by the surety instrument and the amount allocated to each lagoon.~~

~~c) The amount of funds available through the surety instrument must be no less than the sum of funds that would be available if a separate surety instrument had been established and maintained for each lagoon.~~

~~d) In directing funds available through a single surety instrument for the closure of any single lagoon covered by that surety instrument, the Department shall direct only the amount of funds designated for that lagoon, unless the owner agrees to allow the Department to use additional funds available under that surety instrument. Such an agreement does not affect the owner's obligation to provide evidence of financial responsibility up to the level of surety for all other lagoons.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.610 Commercial or Private Insurance (Repealed)

~~a) A lagoon owner may provide evidence of financial responsibility for closure of a livestock waste lagoon by obtaining closure insurance that conforms to the requirements of this Subpart and submitting an executed duplicate original of such insurance policy to the Department.~~

~~b) The insurer must be licensed to transact the business of insurance by the Illinois Department of Insurance pursuant to the Illinois Insurance Code [215 ILCS 5].~~

~~c) The policy must be on forms approved by the Illinois Department of Insurance.~~

~~d) The closure insurance policy must guarantee that funds will be available to close the lagoon. The policy must also guarantee that, upon a notice of liability from the Department, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, in accordance with Section 506.606(e) of this Part.~~

~~e) The policy must provide that the insurer may not cancel or terminate the policy.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.611 Guarantee (Repealed)

~~a) A lagoon owner may provide evidence of financial responsibility for closure of a livestock waste lagoon by obtaining a guarantee that conforms to the requirements of this Subpart.~~

~~b) A guarantor must submit a financial statement to the Department from the guarantor's most recent fiscal year.~~

~~c) The Department will review the financial statement, determine if adequate resources exist to guarantee the closure costs, and notify the lagoon owner of acceptance or denial within 30 days after receipt of the financial statement by the Department.~~

~~d) The guarantor shall guarantee to pay the amount specified in the guarantee upon notice from the Department as provided in Section 506.606(e) of this Part.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.612 Surety Bond (Repealed)

~~a) A lagoon owner may provide evidence of financial responsibility for closure of a livestock waste lagoon by obtaining a surety bond that conforms to the requirements of this Subpart and submitting the bond to the Department.~~

~~b) The surety company issuing the bond must be licensed by the Illinois Department of Insurance pursuant to the Illinois Insurance Code [215 ILCS 5] and approved by the U.S.~~

~~Department of the Treasury as an acceptable surety. Acceptable sureties are listed in Circular 570 from the U.S. Department of the Treasury.~~

~~c) The bond must guarantee that the lagoon owner will provide lagoon closure and content removal in accordance with Section 506.209 of this Part.~~

~~d) The surety bond must be in substantially the form specified in Appendix A, Illustration A of this Part.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.613 Letter of Credit (Repealed)

~~a) A lagoon owner may provide evidence of financial responsibility for closure of a livestock waste lagoon by obtaining an irrevocable standby letter of credit that conforms to the requirements of this Subpart and submitting the letter to the Department.~~

~~b) The issuing institution must be an entity that has the authority to issue letters of credit and:~~

~~1) whose letter of credit operations are regulated by the Illinois Commissioner of Banks and Real Estate; or~~

~~2) whose deposits are insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation.~~

~~c) The letter of credit made out to the Department must be accompanied by a letter from the lagoon owner referring to the letter of credit by number, issuing institution, and date and providing the following information: name and address of the lagoon site and the amount of funds assured for closure of the lagoon by the letter of credit.~~

~~d) The letter of credit must be substantially in the form specified in Appendix A, Illustration B of this Part.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.614 Certificate of Deposit or Designated Savings Account (Repealed)

~~a) A lagoon owner may provide evidence of financial responsibility for closure of a livestock waste lagoon by designating certificate(s) of deposit or savings account(s) for use as financial responsibility.~~

~~b) The issuing or depository financial institution must be an entity whose deposits are insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation.~~

~~e) The Department may draw on the certificate(s) of deposit or savings account(s) to pay the costs of closing a lagoon in accordance with this subsection. The Department shall close a lagoon when the lagoon is removed from service and:~~

~~1) The owner fails to submit the lagoon closure plan required by Section 506.209 of this Part and:~~

~~A. cannot be found; or~~

~~B. fails to cure such failure within 30 days after notice from the Department;~~

~~2) The owner fails to obtain Department approval of a lagoon closure plan within eight months after the date that the lagoon is removed from service, unless the lagoon is maintained or serviced; or~~

~~3) The owner fails to comply with an approved lagoon closure plan and:~~

~~A) cannot be found; or~~

~~B) fails to cure such noncompliance within 30 days after notice from the Department.~~

~~d) The Director of the Department shall be listed as trustee of the certificate(s) of deposit or savings account(s) for the lagoon owner.~~

~~e) At maturity of any certificate of deposit designated as financial responsibility for lagoon closure, the certificate shall be renewed or the proceeds deposited into a designated savings account that meets the requirements of this Section.~~

~~f) The Department shall relinquish trusteeship of the certificate(s) of deposit or savings account(s) when:~~

~~1) The lagoon has been properly closed and a notification of closure completeness pursuant to Section 506.209 of this Part has been issued to the lagoon owner by the Department;~~

~~2) A waiver has been granted by the Department to the lagoon owner allowing the lagoon to be used for an alternative purpose pursuant to Section 506.209 of this Part;~~

~~3) Title of the property containing the lagoon has been transferred to a new owner and the new owner has posted financial assurance as required under Section 506.602(c) of this Part; or~~

~~4) A lagoon owner offers an authorized alternative surety which meets the requirements of Section 506.607(c) of this Part.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.615 Participation in a Livestock Waste Lagoon Closure Fund (Repealed)

~~a) A lagoon owner may provide evidence of financial responsibility for closure of a livestock waste lagoon by participating in a livestock waste lagoon closure fund managed by the Illinois Farm Development Authority. An owner electing to provide evidence of financial responsibility under this Section must submit a certificate of participation in such a lagoon closure fund to the Department.~~

~~b) The certificate of participation submitted pursuant to subsection (a) of this Section must include:~~

~~1) the level of surety for the lagoon;~~

~~2) the dollar amount of coverage provided by the lagoon closure fund;~~

~~3) the dates for which coverage is provided; and~~

~~4) a financial statement of the lagoon closure fund establishing the lagoon closure fund's compliance with the requirements of this Section.~~

~~c) The lagoon closure fund must maintain minimum reserves equal to the greater of:~~

~~1) the level of surety of the largest lagoon covered by the lagoon closure fund; or~~

~~2) twice the average level of surety of lagoons covered by the fund.~~

~~d) The lagoon closure fund must guarantee that funds will be available to close the lagoon. Upon a notice of liability from the Department, the lagoon closure fund must comply with the requirements of Section 506.606(c) of this Part.~~

~~e) If the reserves of the lagoon closure fund are reduced to less than the minimum amount required under subsection (b) due to expenditures of funds in order to comply with Section 506.606(c), then within 120 days after such reduction the lagoon closure fund must demonstrate to the Department that the minimum reserve level has been restored.~~

~~f) The lagoon closure fund may not cancel or terminate coverage prior to the date set forth in the certification pursuant to subsection (b)(3) of this Section.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.620 Penalties (Repealed)

~~The Department may order a lagoon removed from service if the owner fails to provide evidence of financial responsibility to the Department or fails to maintain financial responsibility in the amount required pursuant to Section 506.603 of this Subpart.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

SUBPART G: SETBACKS

Section 506.701 Applicability (Repealed)

~~a) All new livestock management or livestock waste handling facilities shall comply with the setback distances as established in Section 35 of the Livestock Management Facilities Act [510 ILCS 77/35] and with the provisions of this Subpart.~~

~~b) Commencement of operations at a facility reconstructed within two years after partial or total destruction due to natural causes such as tornado, fire, flood, or earthquake, shall not be considered the location of a new livestock management or waste handling facility for setback purposes. Likewise, a residence partially or totally destroyed due to natural causes, such as tornado, fire, flood, or earthquake, shall retain its original setback for a period of no greater than two years, to allow for reconstruction of the residence.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.702 Procedures (Repealed)

~~a) GRANDFATHER PROVISION: FACILITIES IN EXISTENCE PRIOR TO JULY 15, 1991. LIVESTOCK MANAGEMENT FACILITIES AND LIVESTOCK WASTE HANDLING FACILITIES IN EXISTENCE PRIOR TO JULY 15, 1991 SHALL COMPLY WITH SETBACKS IN EXISTENCE PRIOR TO JULY 15, 1991, AS SET FORTH IN THE ILLINOIS ENVIRONMENTAL PROTECTION ACT AND 35 Ill. Adm. Code 501.402. [510 ILCS 77/35(a)]~~

~~b) GRANDFATHER PROVISION: FACILITIES IN EXISTENCE ON EFFECTIVE DATE AND AFTER JULY 15, 1991. LIVESTOCK MANAGEMENT FACILITIES AND LIVESTOCK WASTE HANDLING FACILITIES IN EXISTENCE ON May 21, 1996 (THE EFFECTIVE DATE OF the Livestock Management Facilities ACT) BUT AFTER JULY 15, 1991 SHALL COMPLY WITH SETBACKS IN EXISTENCE PRIOR TO May 21, 1996, AS SET FORTH IN THE ILLINOIS ENVIRONMENTAL PROTECTION ACT AND 35 Ill. Adm. Code 501.402. [510 ILCS 77/35(b)]~~

~~c) NEW LIVESTOCK MANAGEMENT OR LIVESTOCK WASTE HANDLING FACILITIES. ANY NEW FACILITY SHALL COMPLY WITH THE FOLLOWING SETBACKS: [510 ILCS 77/35(c)]~~

~~1) Residence and Non-Farm Residence: FOR PURPOSES OF DETERMINING SETBACK DISTANCES, MINIMUM DISTANCES SHALL BE MEASURED~~

FROM THE NEAREST CORNER OF THE RESIDENCE TO THE NEAREST CORNER OF THE EARTHEN WASTE LAGOON OR LIVESTOCK MANAGEMENT FACILITY, WHICHEVER IS CLOSER.

2) Common Place of Assembly or Non-Farm Business: For the purposes of determining setback distances between a common place of assembly or non-farm business:

a) When the primary activity at a common place of assembly or non-farm business is an outdoor activity, minimum distances shall be measured from the nearest corner of the earthen waste lagoon or livestock management facility to the nearest point on the legal property line of the common place of assembly or non-farm business.

b) When the primary activity at a common place of assembly or non-farm business is not an outdoor activity and is an indoor activity, minimum distances shall be measured from the nearest corner of the earthen waste lagoon or livestock management facility to the nearest corner of the structure where the indoor activity takes place.

3) A LIVESTOCK MANAGEMENT FACILITY OR LIVESTOCK WASTE HANDLING FACILITY SERVING LESS THAN 50 ANIMAL UNITS SHALL BE EXEMPT FROM SETBACK DISTANCES AS SET FORTH IN the Livestock Management Facilities ACT BUT SHALL BE SUBJECT TO RULES PROMULGATED UNDER THE ILLINOIS ENVIRONMENTAL PROTECTION ACT.

4) FOR A LIVESTOCK MANAGEMENT FACILITY OR WASTE HANDLING FACILITY SERVING 50 OR GREATER BUT LESS THAN 1,000 ANIMAL UNITS, THE MINIMUM SETBACK SHALL BE 1/4 MILE FROM THE NEAREST OCCUPIED NON-FARM RESIDENCE AND 1/2 MILE FROM THE NEAREST POPULATED AREA.

5) FOR A LIVESTOCK MANAGEMENT FACILITY OR LIVESTOCK WASTE HANDLING FACILITY SERVING 1,000 OR GREATER BUT LESS THAN 7,000 ANIMAL UNITS, THE SETBACK IS AS FOLLOWS:

A) FOR A POPULATED AREA, THE MINIMUM SETBACK SHALL BE INCREASED 440 FEET OVER THE MINIMUM SETBACK OF 1/2 MILE FOR EACH ADDITIONAL 1,000 ANIMAL UNITS OVER 1,000 ANIMAL UNITS.

B) FOR ANY OCCUPIED RESIDENCE, THE MINIMUM SETBACK SHALL BE INCREASED 220 FEET OVER THE MINIMUM SETBACK OF 1/4 MILE FOR
EACH ADDITIONAL 1,000 ANIMAL UNITS OVER 1,000 ANIMAL UNITS.

6) FOR A LIVESTOCK MANAGEMENT FACILITY OR LIVESTOCK WASTE HANDLING FACILITY SERVING 7,000 OR GREATER ANIMAL UNITS, THE SETBACK IS AS FOLLOWS:

A) FOR A POPULATED AREA, THE MINIMUM SETBACK SHALL BE 1 MILE.

B) FOR ANY OCCUPIED RESIDENCE, THE MINIMUM SETBACK SHALL BE 1/2 MILE.

d) REQUIREMENTS GOVERNING THE LOCATION OF A NEW LIVESTOCK MANAGEMENT FACILITY AND NEW LIVESTOCK WASTE-HANDLING FACILITY AND CONDITIONS FOR EXEMPTIONS OR COMPLIANCE WITH THE MAXIMUM FEASIBLE LOCATION AS PROVIDED IN 35 Ill. Adm. Code 501.402 CONCERNING AGRICULTURE Related POLLUTION SHALL APPLY TO THOSE FACILITIES IDENTIFIED IN SUBSECTIONS (b) AND (c) OF THIS SECTION. WITH REGARD TO THE MAXIMUM FEASIBLE LOCATION REQUIREMENTS, ANY REFERENCE TO A SETBACK DISTANCE IN 35 Ill. Adm. Code 501.402 SHALL MEAN THE APPROPRIATE DISTANCE AS SET FORTH IN THIS SECTION. [510 ILCS 77/35(d)]

e) SETBACK CATEGORY SHALL BE DETERMINED BY THE DESIGN CAPACITY IN ANIMAL UNITS OF THE LIVESTOCK MANAGEMENT FACILITY. [510 ILCS 77/35(e)]

f) SETBACKS MAY BE DECREASED WHEN INNOVATIVE DESIGNS AS APPROVED BY THE DEPARTMENT ARE INCORPORATED INTO THE FACILITY. [510 ILCS 77/35(f)]

1) An owner or operator shall request a setback decrease in writing prior to construction.

2) An owner or operator shall attach to the request for decrease a certification by a Licensed Professional Engineer that in the professional judgment of the Licensed Professional Engineer the innovative designs incorporated into the facility will provide more odor protection than the original setbacks.

3) The Department shall notify the owner or operator of its determination within 30 days after the receipt of the request for decrease. In approving a reduction in setbacks due to innovative designs, the Department shall specifically find that such use of an innovative design will provide more odor protection than the original setbacks.

4) Where the Department grants such a decrease from the setbacks, the Department must maintain a file which includes all supporting data and justification which it relied upon in making its determination. This file is subject to public inspection.

~~g) A SETBACK MAY BE DECREASED WHEN WAIVERS ARE OBTAINED FROM OWNERS OF RESIDENCES THAT ARE OCCUPIED AND LOCATED IN THE SETBACK AREA. [510 ILCS 77/35(g)] A setback also may be decreased when waivers are obtained from owners of non-farm businesses or common places of assembly that are located in the setback area.~~

~~1) An owner or operator request for a setback decrease shall be in writing and submitted to the Department prior to construction.~~

~~2) An owner or operator shall attach to the request copies of the written and notarized waivers from all the owner(s) of the residence(s), non-farm business(es), and common place(s) of assembly that are located within the setback area.~~

~~3) Within 30 days after receipt of the request and waivers, the Department shall notify the owner or operator in writing of the setback decrease.~~

~~4) When such a decrease from the setbacks is requested, the Department must maintain a file which includes all supporting data and justification concerning the setback decrease. This file is subject to public inspection.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.703 Initial Determination of Setbacks (Repealed)

~~The requirements of this Section do not apply to new livestock management facilities or new livestock waste handling facilities serving less than 50 animal units.~~

~~a) An owner or operator shall file a notice of intent to construct which meets the informational requirements of subsection (b) of this Section for a new livestock management facility or new livestock waste handling facility with the Department prior to construction to establish an initial determination of setbacks.~~

~~b) The notice of intent to construct shall contain a legal description of the land on which the livestock facility will be constructed; the name(s) and addresses of the owner(s) or operator(s) of the facility; the type and size of the facility and number of animal units; the names and addresses of the owner(s), including local, State and federal governments, of the property located within the setback area; the distance to the nearest populated area, residence, non-farm business, and common place of assembly; a map or sketch showing the proposed facility and setbacks; and a statement identifying whether a request for decrease in setbacks, pursuant to Section 506.702(f) or (g), has been sought and whether the request has been granted or denied yet.~~

~~c) The owner or operator shall mail by certified mail the notice of intent to construct to the owner(s) of the property located within the setback distances. The owner(s) of the property located within the setback distances are presumed, unless established to the~~

~~contrary, to be the person shown by the current collector's warrant book to be the party in whose name the taxes were last assessed.~~

~~d) Within 30 days after receipt of the notice to construct, the Department shall notify the owner or operator in writing whether the setback distances have been met.~~

~~e) The date the notice of intent to construct is filed with the Department establishes the base date for the determination of whether residences, non-farm businesses, or common places of assembly exist for setback purposes and shall remain the base date if construction begins within one year following receipt of the Department's determination or if a lagoon registration form is filed with the Department within one year after receipt of the Department's determination of compliance with the setback distances.~~

~~f) If the Department determines that the owner or operator has complied with the setback requirements, later-constructed or erected residences, non-farm businesses, or common places of assembly cannot operate to alter the setback as initially determined, subject to the limitation in subsection (e) of this Section.~~

~~g) Where an intent to construct has been filed, the Department must maintain a file which includes all filings and supporting data and justification which it relied upon in making its determination regarding compliance with the setback distances. This file is subject to public inspection.~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.704 Penalties (Repealed)

~~a) For violations of the setback distance requirements, the Department may issue one of the following to the owner or operator of the livestock management facility or livestock waste handling facility:~~

~~1) If during construction, a cease and desist order which prohibits further construction of the livestock management facility or livestock waste handling facility, prohibits entry of livestock into the livestock management facility, and prohibits use of the livestock waste handling facility; or~~

~~2) An operational cease and desist order.~~

~~b) A cease and desist order issued by the Department pursuant to subsection (a) of this Section shall be canceled by the Department pursuant to the following:~~

~~1) Submission to the Department of a valid waiver as provided for in Section 506.702(g) of this Subpart by the livestock management facility owner or operator or the livestock waste handling facility owner or operator; or~~

~~2) Verification by the Department of compliance with the appropriate setback distances as described in Section 35 of the Livestock Management Facilities Act [510 ILCS 77/35].~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506. Appendix A Surety Instruments (Repealed)

Section 506.Illustration A Surety Bond (Repealed)

~~SURETY BOND~~

~~Date bond executed:~~
~~Effective date:~~
~~Principal:~~
~~Type of organization:~~
~~State of incorporation:~~
~~Surety:~~
~~Sites:~~

~~Name:~~
~~Address:~~
~~City:~~
~~Amount guaranteed by this bond: $_____~~

~~Name:~~
~~Address:~~
~~City:~~
~~Amount guaranteed by this bond: $_____~~

~~Please attach a separate page if more space is needed for all sites.~~

~~Total penal sum of bond $_____~~

~~Surety's bond number:~~

~~The Principal and the Surety promise to pay the Illinois Department of Agriculture ("Department") the above penal sum unless the Principal provides closure for each site in accordance with 510 ILCS 77/15(c) and 35 Ill. Adm. Code 506.209. To the payment of this obligation the Principal and Surety jointly and severally bind themselves, their heirs, executors, administrators, successors and assigns.~~

~~Whereas the Principal is required, under Section 15(b) of the Livestock Management Facilities Act ("LMFA") to register at least one livestock waste lagoon with the Department; and~~

~~Whereas the Principal is required, under Section 17 of the LMFA to evidence financial responsibility for closure of each registered lagoon; and~~

Whereas the Surety is licensed by the Illinois Department of Insurance; and

Whereas the Principal and Surety agree that this bond shall be governed by the laws of the State of Illinois;

The Surety shall pay the penal sum to the Department if, during the term of the bond, the Department issues a notice of liability to the Surety.

The Surety shall pay the penal sum of the bond to the Department within 30 days after the Department mails the notice of liability to the Surety unless the Surety assumes responsibility to provide closure and so notifies the Department. Payment shall be made by deposit of funds into a designated account upon which the Department is authorized to draw.

The liability of the Surety shall not be discharged by any payment or succession of payments unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the Surety exceed the amount of the penal sum. If the Surety assumes responsibility to provide closure, expenditures made by the Surety for that purpose may exceed the amount of the penal sum, but the amount of the Surety's obligation under this bond is not affected.

This bond shall expire on the _____ day of _____, _____.

The Principal may terminate this bond by sending written notice to the surety; provided, however, that no such notice shall become effective until the Surety receives written authorization for termination of the bond from the Department.

In Witness Whereof, the Principal and Surety have executed this Surety Bond and have affixed their seals on the date set forth above.
The persons whose signatures appear below certify that they are authorized to execute this surety bond on behalf of the Principal and Surety.

PRINCIPAL

Signature Name _____
Typed Name _____
Address _____
Title _____
State of Incorporation _____
Date _____

_____ Corporate seal
CORPORATE SURETY

~~Signature~~
~~Typed Name~~
~~Title~~

~~Corporate seal~~

~~Bond premium:~~

~~$~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Section 506.Illustration B Irrevocable Standby Letter of Credit (Repealed)

~~IRREVOCABLE STANDBY LETTER OF CREDIT~~

~~Director~~
~~Illinois Department of Agriculture~~
~~P.O. Box 19281~~
~~Springfield IL 62794-9281~~

~~Dear Sir or Madam:~~

~~We have authority to issue letters of credit. Our letter-of-credit operations are regulated by the Illinois Commissioner of Banks and Real Estate or our deposits are insured by the Federal Deposit Insurance Corporation or the Federal Savings and Loan Insurance Corporation. (Omit language that does not apply.)~~

~~We hereby establish our Irrevocable Standby Letter of Credit No. _____ in your favor, at the request and for the account of _____ up to the aggregate amount of _____ U.S. dollars ($_____), available upon presentation of:~~

~~1. your sight draft, bearing reference to this letter of credit No._____; and~~
~~2. your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Livestock Management Facilities Act [510 ILCS 77] and 35 Ill. Adm. Code 506.606(a) or 506.606(c)."~~

~~This letter of credit is effective as of _____ and shall expire on _____.~~

~~Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of draft directly into a designated account in accordance with your instructions.~~

~~This letter of credit is governed by the Uniform Commercial Code [810 ILCS 5].~~

~~Signature~~
~~Typed Name~~
~~Title~~
~~Date~~
~~Name and address of issuing institution~~
~~This credit is subject to~~

(Source: Repealed at 25 Ill. Reg. _____, effective _____.)

Proposed Section in 8 Ill. Adm. Code 900	Corresponding Section in 35 Ill. Adm . Code 506	Substantive Changes
900.102 Severability	506.102 Severability	None
900.103 Definitions	506.103 Definitions	Added "Animal Unit" Laying hens or broilers multiplied by 0.005 def.; added "Flood fringe" def.; added "Floodplain" def.; added "Floodway" def.; added "inhabited residence" def.; added "Karst area" def.; added Karstified carbonate bedrock" def.; added "Livestock shelter" def.
900.104 Incorporations by Reference	506.104 Incorporations by Reference	Added some Incorporations by Reference
900.105 Recordkeeping	506.105 Recordkeeping	None
900.201 Applicability	506.701 Applicability	No change
900.202 Procedures	506.702 Procedures	No change
900.203 Penalties	None	New Section, "Penalties" for failure to comply with setback limitations
900.301 Applicability	None	Applicability of "Intent to Construct" forms
900.302 Filing	507.703 Initial Determination of Setbacks	"Intent to Construct" Notice must be filed, incorporates statutory changes
900.303 Procedures	506.203 Registration	"Procedures" for construction; Notice of Intent to Construct similar to registration form; review of Notice; new notice to county if necessary for Public Information

		Meeting
900.304 Establishment of Base Date and Setback Period	506.Subpart G: Setbacks	New Section, incorporates statutory requirements for establishment of base date
900.305 Penalties	None	New Section, incorporates statutory changes
900.401 Applicability	None	New Section, incorporates statutory changes
900.402 Notice	None	New Section, incorporates statutory changes
900.403 Request for Informational Meeting	None	New Section, incorporates statutory changes
900.404 Notice of Informational Meeting	None	New Section, incorporates statutory changes
900.405 Conduct of Informational Meeting	None	New Section, incorporates statutory changes
900.406 County Board Recommendation	None	New Section, incorporates statutory changes
900.407 Final Determination	None	New Section, incorporates statutory changes
900.408 Amendment to Plans	None	New Section, incorporates statutory changes
900.409 Construction	None	New Section, incorporates statutory changes
900.501 Applicability	None	New Section, applicability to facilities other than lagoons
900.502 Siting Restrictions and Additional Construction Requirements	None	New Section, for livestock facilities constructed after July 13, 1999; not within floodplains, prevent seepage into groundwater
900.503 Livestock Facilities Not Subject to the Public Informational Meeting Process	None	New Section, incorporates statutory changes
900.504 Livestock Facilities Subject to the Public Informational Meeting Process	None	New Section, must complete registration of construction plans, results of site investigation
900.505 Inspections	None	New Section, inspections of construction site by Dept. of AG
900.506 Certification of Compliance	None	New Section, incorporates statutory changes
900.507 Failure to Register Construction Plans	None	New Section, incorporates statutory changes
900.508 Removal From	506.209 Lagoon Closure	waste must be removed within 12 months

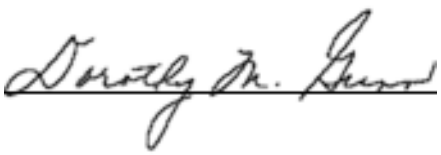
Service	and Ownership Transfer	according to waste management plan as opposed to lagoon closure plan
900.509 Return to Service	None	New Section, incorporates statutory changes
900.510 Odor Control	None	New Section, incorporates statutory changes
900.511 Perimeter Drainage Tubing Sampling, Analysis and Reporting Procedures	None	New Section added at Second Notice.
.601 Applicability	.201 Applicability	more specific applicability dates; grandfather clause for current facilities
.602 Lagoon Siting Restrictions and Additional Construction Requirements	None	all statutory language; deals with construction requirements, clarifies construction standards and specifications will be set forth in Board rules
.603 Registration	.203 Registration	requires registration at least 37 days prior to construction; raises fees from $50 to $250; more specific registration information (i.e. floodplain information); adds requirement for informational meeting
.604 Lagoon Construction, Registration, and Certification Inspections	None	expands department authority to inspect and certify livestock waste lagoons
.605 Certification of Construction	.207 Certification of Construction	contains new statutory requirements for certification of lagoon construction
.606 Failure to Register or Construct in Accordance with Standards	.208 Failure to Register or Construct in Accordance with Standards	no changes
.607 Lagoon Operational Inspections	None	contains statutory requirements for random visual inspections and penalties to be assessed for violations resulting from inspections
.608 Lagoon Closure	.209 Lagoon Closure and Ownership Transfer & .106 Alternatives, Modifications, and Waivers	new sampling requirements and analysis of nutrient content of all remaining livestock waste, sludge and 6 in. of soil from lagoon interior; new requirement to restore topography to preconstruction condition; new waiver requirements
.609 Odor Control	None	contains new odor control requirements
.610 Ownership Transfer	.209 Lagoon Closure and Ownership Transfer	no changes
900.611 Monitoring Well	None	New Section added at Second Notice.

Sampling, Analysis		
.701 Scope, Applicability, and Definitions	.601 Scope, Applicability, and Definitions	adds two definitions; "Audited financial statement" and "Guarantor"
.702 Mechanisms for Providing Evidence of Financial Responsibility	.602 Mechanisms for Providing Evidence of Financial Responsibility	no changes
.703 Level of Surety	.603 Level of Surety	no changes
.704 Upgrading Surety Instruments	.604 Upgrading Surety Instruments	no changes
.705 Release of Lagoon Owner and Financial Institution	.605 Release of Lagoon Owner and Financial Institution	no changes
.706 Financial Responsibility Proceeds	.606 Release of Lagoon Owner and Financial Institution	no changes
.707 Use of Multiple Surety Instruments	.607 Use of Multiple Surety Instruments	no changes
.708 Use of a Single Surety Instrument for Multiple Lagoons	.608 Use of a Single Surety Instrument for Multiple Lagoons	no changes
.709 Commercial or Private Insurance	.610 Commercial or Private Insurance	no changes
.710 Guarantee	.611 Guarantee	contains more detail in reporting requirements-time frames are not changed
.711 Surety Bond	.612 Surety Bond	no changes
.712 Letter of Credit	.613 Letter of Credit	no changes
.713 Certificate of Deposit or Designated Savings Account	.614 Certificate of Deposit or Designated Savings Account	no changes
.714 Participation in a Livestock Waste Lagoon Closure Fund	.615 Participation in a Livestock Waste Lagoon Closure Fund	no changes
.720 Penalties	.620 Penalties	no changes
Subpart H: Waste Management Plan	Subpart C: Waste Management Plan	
.801 Purpose	.301 Purpose	adds language for land application based on phosphorous rates
.802 Scope and Applicability	.302 Scope and Applicability	adds new statutory language related to land application of animal waste; lowers animal unit requirements from 7,000 to 5,000; new language on submission of management plans to the Department
.803 Waste Management Plan Contents	.303 Waste Management Plan Contents	does not include Board requirement for; directions to facility from nearest post

		office or estimation of annual waste to be disposed of. Adds new statutory language
.804 Livestock Waste Volumes	.304 Livestock Waste Volumes	new statutory requirements for estimating annual volume of available waste for land application
.805 Nutrient Value of Livestock Waste	.305 Nutrient Content of Livestock Waste	new sources included to indicate maximum and minimum values to be used when planning for nitrogen content of waste.
.806 Adjustments to Nitrogen Availability	.306 Adjustments to Nitrogen Availability	more specific requirements for adjustments
.807 Targeted Crop Yield Goal	.307 Targeted Crop Yield Goal	adds subsection requiring nitrogen and phosphorus fertilization rates
.808 Nitrogen Credits	.309 Nitrogen Credits	no changes
.809 Records of Waste Disposal	.310 Records of Waste Disposal	no changes
.810 Approval of Waste Management Plans	.311 Approval of Waste Management Plans	no changes
.811 Sludge Removal	.312 Sludge Removal	adds phosphorus based application restrictions
.812 Soil Phosphorus Testing	None	new requirement; requires sampling every 3 years
.814 Plan Updates	.313 Plan Updates	requires plans be updated when there is a change in waste volume and when there is a change in phosphorus test results
.815 Penalties	.314 Penalties	statutory increase in penalties from $500 to $1,000 for first violations
.816 Odor Control	None	new statutory requirements
Subpart I: Certified Livestock Manager	None	
.901 Applicability	.401 Applicability	new statutory requirements for certification of livestock managers

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on September 6, 2001, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board