

ILLINOIS POLLUTION CONTROL BOARD

December 5, 1996

IN THE MATTER OF:)	
)	
LIVESTOCK WASTE REGULATIONS)	R97-15
35 ILL. ADM. CODE 506)	(Rulemaking - Land)

Proposed Rule. First Notice.

OPINION AND ORDER OF THE BOARD (by R.C. Flemal, C.A. Manning, and G.T. Girard):

This matter comes before the Board upon a petition for rulemaking filed by the Illinois Department of Agriculture (Department of Agriculture) on November 21, 1996. The proposal asks the Board to adopt regulations implementing the Livestock Management Facilities Act (LMFAct) (510 ILCS 77/*et seq.*; P.A. 89-456, eff. May 21, 1996).

Pertinent history of the proposal is as follows. In July 1995, Governor Jim Edgar convened the Livestock Industry Task Force (LITF). The LITF included members of the major livestock, processing, veterinary medicine, livestock supply, and grain producer groups. LITF was a major participant in the proposed LMFAct. Governor Edgar signed the LMFAct into law as Public Act 89-456 on May 21, 1996. The LMFAct sets forth a participative rulemaking process to provide the State, the agricultural community, environmental associations, and interested citizens, a public forum for the development of standards and rules pursuant to the LMFAct. The LMFAct sets the outline for the proper siting, construction, operation and management of livestock management facilities and associated waste handling structures. It further provides for education and certification of livestock managers, research, and proper disposal of livestock waste.

Additionally the LMFAct established a Livestock Management Facilities Advisory Committee made up of the Directors of the Department of Agriculture, Illinois Department of Natural Resources, Illinois Department of Public Health, and the Illinois Environmental Protection Agency. This Committee made recommendations to the Department of Agriculture for the regulations necessary to implement the LMFAct. The Department of Agriculture prepared the instant proposal and submitted it to the Board as required, within six (6) months of the effective date of the LMFAct.

Before the Department of Agriculture filed the instant proposal, the Department of Agriculture on October 15, 1996 proposed to the Board emergency rules related to the LMFAct. On October 29, 1996 the Board found, pursuant to Section 27 of the Environmental Protection Act (EPAAct) (415 ILCS 5/27 (1994)) and Section 5-45 of the Administrative Procedure Act (APAAct) (5 ILCS 100/5-45 (1994)), that a "situation exists which reasonably constitutes a threat to the public interest, safety or welfare" to the citizens of Illinois. As a

result, the Board adopted emergency rules that immediately implemented certain provisions of the LMFAct. Those provisions included site investigations, registration fees, livestock waste lagoon design standards, liner standards, groundwater monitoring, certification of design standards, waste management plans, and certification of livestock managers. (In the Matter of: Emergency Rulemaking: Livestock Waste Regulations 35 Ill. Adm. Code 505, R97-14.) The Board's emergency rules adopted in R97-14 became effective for 150 days following their adoption.

The proposal presented to the Board in the instant docket is substantially the same as the Board's emergency rules adopted in R97-14. The proposal is organized in several parts, each with its own applicability section and specific requirements. The initial three subparts include: general provisions; standards for lagoon registration, construction, and certification; and waste management plan development, implementation and maintenance. The final four subparts provide a framework for the Department of Agriculture's administration of the certified livestock manager program, penalties associated with the LMFAct, owner or operator financial responsibility requirements, and setback waivers.

The Department of Agriculture included with its proposal a request that the Board waive the 200 signature requirement of Section 28(a) of the EPAct. That request is granted. The proposal does not include the Budgetary and Economic Impact Statement. The Department of Agriculture is hereby ordered to provide the Budgetary and Economic Impact Statement no later than December 23, 1996.

Pursuant to P.A. 89-456, the Board is required to complete this rulemaking within six (6) months of the Department of Agriculture filing the proposal. Thus, the Board must complete this rulemaking on or before May 21, 1997. Due to the stringent time-frame for final adoption, the Board is today sending this proposal to first notice without commenting on the merit of the proposal¹. The Board anticipates the rulemaking will follow the schedule below:

first notice	December 5, 1996	
first hearing	January 14, 1997	(Jacksonville)
second hearing	January 16, 1997	(Champaign)
third hearing	January 27, 1997	(DeKalb)
fourth hearing	January 29, 1997	(Galesburg)
fifth hearing	January 31, 1997	(Mt. Vernon)
close of hearing record	February 14, 1997	
second notice	March 20, 1997	

¹ The Board does today make some non-substantive mechanical changes to the proposal intended to conform the proposal to codification requirements.

final adoption and filing

May 15, 1997

The purpose of the scheduled hearings is to build the record which will be the basis for the final rules promulgated by the Board. The Department of Agriculture will be given the opportunity to present its regulatory proposal, including the merit and economic impact of the regulations, to the Board and the public. Members of the public, associations, state agencies, and other interested entities or persons will be given the opportunity to present testimony, as well as to ask questions of the Department of Agriculture and any others who provide testimony. The Board is particularly interested in building the scientific record in this rulemaking, and, therefore, looks forward to the testimony of the other state agencies comprising the Livestock Management Facilities Advisory Committee, especially in regards to contentious issues, such as groundwater protection measures and odor. Hearing participants can also make any comments or suggestions on the proposed rules, or express support or opposition for the proposal. Procedures for participating in the hearing are specified in the hearing officer order.

Copies of this opinion, the proposed rules, and the hearing officer's order may be viewed and downloaded at the Board's Web site: <http://www.state.il.us/pcb/>. Copies may also be requested from the Clerk of the Illinois Pollution Control Board, James R. Thompson Center, 100 West Randolph, Suite 11-500, Chicago, Illinois 60601 (312-814-3461).

ORDER

The Board hereby proposes for first notice the following new rules at 35 Ill. Adm. Code 506. The Clerk of the Board is directed to file these proposed rules with the Secretary of State.

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

PART 506 LIVESTOCK WASTE REGULATIONS

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Section	
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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 [P.A. 89-456, effective May 21, 1996, 510 ILCS 77/1].

SOURCE: Adopted in R97-15 at ____Ill. Reg. _____, effective _____.

NOTE: Capitalization denotes statutory language.

SUBPART A: GENERAL PROVISIONS

Section 506.101 Applicability

This Subpart applies to 35 Ill. Adm. Code 506. The applicability of Subpart B, Standards for Livestock Waste Lagoons, is set forth at Section 506.201 of this Part. The applicability of Subpart C, Waste Management Plans, is set forth at Section 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.

Section 506.102 Severability

If any provision of this Part or its application to any person or under any other circumstances is adjudged invalid, such adjudication does not affect the validity of this Part as a whole or of any portion not adjudged invalid.

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 herein shall have their associated meaning as follows:

“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:

- a) BROOD COWS AND SLAUGHTER AND FEEDER CATTLE MULTIPLIED BY 1.0.
- b) MILKING DAIRY COWS MULTIPLIED BY 1.4.
- c) YOUNG DAIRY STOCK MULTIPLIED BY 0.6.
- d) SWINE WEIGHING OVER 55 POUNDS MULTIPLIED BY 0.4.
- e) SWINE WEIGHING UNDER 55 POUNDS MULTIPLIED BY 0.03.
- f) SHEEP, LAMBS, OR GOATS MULTIPLIED BY 0.1.
- g) HORSES MULTIPLIED BY 2.0.
- h) TURKEYS MULTIPLIED BY 0.02.
- i) LAYING HENS OR BROILERS MULTIPLIED BY 0.01 (IF THE FACILITY HAS CONTINUOUS OVERFLOW WATERING).
- j) LAYING HENS OR BROILERS MULTIPLIED BY 0.03 (IF THE FACILITY HAS A LIQUID MANURE HANDLING SYSTEM).
- k) DUCKS MULTIPLIED BY 0.02.

[510 ILCS 77/10.10]

“Aquifer material” means sandstone which is five feet or more in thickness, or fractured carbonate which 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 Section 506.202 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]

“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.

“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]

“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. A LIVESTOCK MANAGEMENT FACILITY AT EDUCATIONAL INSTITUTIONS, LIVESTOCK PASTURE OPERATIONS, 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 Facility Act or the requirements of this Part. [510 ILCS 77/10.30]

“Livestock pasture operation” means a lot or facility (other than an aquatic animal production facility) where:

- a) Crops, vegetation, forage growth, or post-harvest residues that are grown in place are sustained in the normal growing season over a substantial portion of the lot or facility; and,
- b) Animals are not continuously confined or enclosed in a covered structure.

“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]

“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 THE EFFECTIVE DATE OF THE Livestock Management Facility 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 Facility ACT. [510 ILCS 77/10.45]

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

“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 lagoon 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. 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; identifying the number of residences or the existence of a non-farm business or the existence of a common place of assembly; and, comparing the appropriate number of respective units determined to be present within the setback distance. The provision that qualifies a common place of assembly or a non-farm business based on 50 persons or more frequenting the said place once per week shall include 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. [510 ILCS 77/10.60]

“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 USDA soil texture classification scheme includes soil textures of sand, and loamy sand, and portions of sandy loam and sandy clay loam.

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 Edition, 1995.
- 2) ASAE. American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659, (616) 429-5585, "Design of Anaerobic Lagoons for Animal Waste Management", ASAE Standards 1992, ASAE EP403.1, 1992, pp. 498-500.
- 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.
- 4) USDA-NRCS. United States Department of Agriculture - Natural Resources Conservation Service, 1902 Fox Drive, Champaign, IL 61820, "Waste Treatment Lagoon", Illinois Field Office Technical Guide, Section IV, IL359, 5p.

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

SUBPART B: STANDARDS FOR LIVESTOCK WASTE LAGOONS

Section 506.201 Applicability

- 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 shall be considered as registered and certified pursuant to this Subpart.

Section 506.202 Site Investigation

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

- b) The owner or operator shall perform one or more soil borings 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 as follows:
 - 1) The soil boring shall extend to a depth that includes 50 feet from the 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;
 - 3) Continuous samples shall be recovered from each soil boring; 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) As an alternative to performing the soil boring(s) required under subsection (b) of this Section, the owner or operator of a livestock waste lagoon may propose to the Department to utilize alternative information sources. The Department shall evaluate the proposal; shall determine whether the alternative information source 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.
- d) The site investigation in accordance with subsections (b) or (c) of this Section shall be conducted under the direction of a Licensed Professional Engineer or Registered Professional Geologist. Upon completion of the site investigation as required under subsections (b) or (c) of this Section, the supervising Licensed Professional Engineer or Registered 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.

Section 506.203 Registration

- 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 NEAREST 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 associated 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 Registered 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)]

- c) THE DEPARTMENT UPON RECEIPT OF 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 it's 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)]

Section 506.204 Lagoon Design Standards

- a) The owner or operator of ANY LIVESTOCK WASTE LAGOON SUBJECT TO this Part SHALL CONSTRUCT OR MODIFY the lagoon IN ACCORDANCE WITH:
 - 1) "DESIGN OF ANAEROBIC LAGOONS FOR ANIMAL WASTE MANAGEMENT", ASAE ENGINEERING PRACTICE 403.1; 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 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 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 upper most 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, a borrowed clay, 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 lagoon shall include the implementation of a groundwater monitoring program in accordance with Section 506.206 of this Part.
- g) Any livestock waste lagoon subject to the provisions of this Part shall meet or exceed the following:
 - 1) The minimum berm top width shall be 8 feet;

- 2) Interior and exterior 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;
- 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 4.4.1.1, ASAE EP 403.1, ASAE Standards 1992, p 498, 499;
 - B) A livestock waste volume, which shall be sufficient to store the waste generated by the facility for a period not less than 270 days as determined from Table 1, ASAE EP 403.1, ASAE Standards 1992, p 498;
 - C) Runoff and wash down volumes, 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 which are also directed into the lagoon; and
 - D) A sludge accumulation volume, as calculated pursuant to subsection 4.4.1.4, ASAE EP 403.1, ASAE Standards 1992, p 499;
- 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 the lagoon does not collect runoff from areas other than the exposed surface of the lagoon (including associated interior berm slopes and flat berm top 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 Groundwater Protection Act [415 ILCS 55] 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, and livestock waste volume and shall be designated as the "START PUMPING" elevation;
 - 8) Water shall be added to a newly constructed or modified lagoon to a depth of at least 60% of the design depth 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, deviate from THESE STANDARDS IN ORDER TO MEET SITE SPECIFIC OBJECTIVES. The owner or operator shall demonstrate that such deviation 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)]

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 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 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 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, deviate from THESE STANDARDS IN ORDER TO MEET SITE SPECIFIC OBJECTIVES. The owner or operator shall demonstrate that such deviation 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)]

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 which meets the requirements of this Section.
- b) The groundwater monitoring network shall consist of a minimum of three monitoring wells on the basis of local groundwater conditions within 20 feet of the exterior toe of the berm with at least two wells down gradient of the lagoon. 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 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 five foot screened interval; and
 - 4) The screen shall be set in a sand pack of no less than five feet and no greater than seven feet.

- 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) Monitoring wells shall be sampled once prior to placing the lagoon in service and quarterly thereafter. The samples shall be collected and analyzed consistent with the methods specified in Section 506.104 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.

The Department may collect and analyze samples or split samples from monitoring wells installed pursuant to this Section at the Department's 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)]

- f) 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.
- g) The Department shall review the submittal provided pursuant to subsection (f) 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.

Failure of the owner or operator to submit the information required pursuant to subsection (f) of this Section or to implement the response action approved or modified by the Department shall be considered as a failure to construct a lagoon in accordance with the requirements of this Part.

- h) THE OWNER OR OPERATOR OF THE EARTHEN LIVESTOCK LAGOON MAY, upon written request and WITH written APPROVAL FROM THE DEPARTMENT, deviate from THESE STANDARDS IN ORDER TO MEET SITE SPECIFIC OBJECTIVES. The owner or operator shall demonstrate that such deviation 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)]

Section 506.207 Certification of Construction

- 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 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)]

Section 506.208 Failure to Register or Construct in Accordance with Standards

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] and in this Part SHALL, UPON BEING IDENTIFIED AS SUCH BY THE DEPARTMENT, BE GIVEN WRITTEN NOTICE BY THE DEPARTMENT TO REGISTER WITHIN 10 WORKING DAYS OF RECEIPT OF THE NOTICE. THE DEPARTMENT MAY INSPECT SUCH LAGOON AND REQUIRE COMPLIANCE IN ACCORDANCE WITH SUBSECTIONS (A) AND (B) of the Livestock Management Facilities Act [510 ILCS 77] 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 the Livestock Management Facilities Act [510 ILCS 77] 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)]

Section 506.209 Lagoon Closure and Ownership Transfer

- a) Closure: 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 to be removed from service, the requirements contained in Section 15 (e) of the Livestock Management Facilities Act [510 ILCS 77] shall be met and the owner or operator shall submit a lagoon closure plan to the Department for review and approval. The plan shall provide for the following:

- A) The sampling, analysis and reporting of results in the closure plan to the Department 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 which will be no greater than two years from the cessation of operation date unless the lagoon is maintained or serviced.
- 2) The Department shall review and approve 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)]
- 3) Upon completion of the lagoon closure activities as prescribed by the Department-approved closure plan, the owner or operator shall notify the Department to allow for post closure inspection. 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) Ownership Transfer: UPON A CHANGE IN THE OWNERSHIP OF A REGISTERED EARTHEN LIVESTOCK 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 (e)]

SUBPART C: WASTE MANAGEMENT PLAN

Section 506.301 Purpose

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 requirement of the crop to be grown during that growing season.

Section 506.302 Scope and Applicability

- 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] 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 of 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) NOT WITHSTANDING THE above provisions, A LIVESTOCK MANAGEMENT FACILITY SUBJECT TO THIS SUBSECTION MAY BE OPERATED ON AN INTERIM BASIS BUT NOT TO EXCEED SIX MONTHS AFTER THE EFFECTIVE DATE OF THE RULES PROMULGATED PURSUANT TO the Livestock Management Facilities Act [510 ILCS 77] TO ALLOW FOR THE OWNER OR OPERATOR OF THE FACILITY TO DEVELOP A WASTE MANAGEMENT PLAN. [510 ILCS 77/20(c)]
- d) The owner or operator of a livestock management facility with 7,000 or greater animal units shall prepare, maintain, implement, and submit to the Department the waste management plan for approval 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 of 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 optimum crop yields 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, 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.

Section 506.303 Waste Management Plan Contents

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, 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, the current year, and the next two years after the current year;

- j) Optimum crop yields for each crop in each field, verified by yield history, if available;
- k) 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 optimum crop yields;
 - 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) of this Section; [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) A 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, however livestock waste may be applied through irrigation systems onto grassed waterways 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, and precipitation is not expected within 24 hours; and [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.
- u) A provision that the livestock waste handling facility owner, operator, or certified manager shall consider the addition of zinc and copper to the analyte list utilized for soil samples collected as part of the normal soil sampling and testing program for crop production from the land where livestock waste is applied. Such results shall become a part of the waste management plan and shall be available for inspection by Department personnel during normal business hours.

Section 506.304 Livestock Waste Volumes

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.

Section 506.305 Nutrient Content of Livestock Waste

- 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 and analyzed within 60 working days prior to application of the waste.
- 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, total potassium, copper, and zinc. Results of the analysis shall be included in the waste management plan.

Section 506.306 Adjustments to Nitrogen Availability

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. The Department may adopt criteria which set forth the adjustments to nitrogen availability.

Section 506.307 Optimum Crop Yields

- a) The optimum crop yield, 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 optimum crop 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 following prioritized listing of sources of data shall be utilized to determine average yield. The sources shall be utilized according to the prioritized order:

- 1) Proven yields. The owner or operator shall indicate the method used to determine the proven yield. Data from years with crop disasters may be discarded;
 - 2) Crop insurance yields. A copy of the crop 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 can not obtain an optimum crop yield pursuant to subsection (a) of this Section. A soil map of the application areas shall be included in the plan. The optimum crop yield shall be determined by a weighted average of the soil interpretation yield estimates for the areas that will receive livestock waste.

Section 506.308 Crop Nitrogen Requirements

Unless otherwise provided for by Board regulations, the Department may adopt criteria setting forth values for crop nitrogen requirements. These values shall be used by the livestock facility owner or operator in the calculations required in Section 506.303(m)(5) of this Part.

Section 506.309 Nitrogen Credits

- 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.
- c) Unless otherwise provided for by Board regulations, the Department may adopt criteria setting forth values for nitrogen credits from previous crops.

Section 506.310 Records of Waste Disposal

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.

Section 506.311 Approval of Waste Management Plans

- 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 optimum yields;
 - 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 of 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.

Section 506.312 Sludge Removal

- 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 optimum yield 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 optimum yield of the crop to be grown.

- c) Nitrogen requirements based on optimum yield 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.

Section 506.313 Plan Updates

- 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 application of the livestock waste to the land. The nitrogen content results from the most recent analysis shall be used when updating the plan.
- 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.

Section 506.314 Penalties

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)]

SUBPART D: CERTIFIED LIVESTOCK MANAGER

Section 506.401 Applicability

- 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 of 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 [510 ILCS 77].
- c) A livestock manager certified pursuant to the emergency amendment adopted in R97-14 at 20 Ill. Reg. 14903 effective October 31, 1996 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.

Section 506.402 Procedures

In addition to the procedures specifically required under this Subpart, the Department may adopt and promulgate all procedures reasonably necessary to perform its duties and responsibilities under this Subpart.

SUBPART E: PENALTIES

Section 506.501 General

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 [510 ILCS 77] 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.

Section 506.502 Cease and Desist Order Procedures

In addition to the procedures specifically required under this Subpart, the Department may adopt and promulgate by rule all cease and desist order procedures reasonably necessary to perform its duties and responsibilities under this Subpart.

Section 506.503 Lagoon Registration and Certification Violations

- a) For violations of lagoon registration and certification requirements which occur 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 [510 ILCS 77] and this Part by the Department.
- b) For violations of lagoon registration and certification requirements 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 [510 ILCS 77] 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 [510 ILCS 77] and this Part.

Section 506.504 Certified Livestock Manager Violations

For violations pertaining to the certified livestock manager requirements, an operational cease and desist order may be issued by the Department. The operational 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.

Section 506.505 Waste Management Plan Violations

- a) For violations pertaining to the waste management plan requirements, the Department may issue an operational cease and desist order. 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.
- b) A waste management plan prepared as a result of a warning letter or compliance agreement shall be subject to approval by the Department.
- c) Penalties shall not be imposed for excessive nitrogen application for unplanned cropping changes due to weather or other unforeseeable circumstances.

SUBPART F: FINANCIAL RESPONSIBILITY

Section 506.601 Applicability

OWNERS OF NEW OR MODIFIED LAGOONS REGISTERED UNDER THE PROVISIONS OF the Livestock Management Facilities Act [510 ILCS 77] SHALL ESTABLISH AND MAINTAIN EVIDENCE OF FINANCIAL RESPONSIBILITY TO PROVIDE FOR THE CLOSURE OF THE LAGOONS AND THE PROPER DISPOSAL OF THEIR CONTENTS WITHIN THE TIME PROVISIONS OUTLINED IN the Livestock Management Facilities Act. [510 ILCS 77/17]

Section 506.602 Evidence of Financial Responsibility

- 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; or
 - 5) CERTIFICATE OF DEPOSIT OR DESIGNATED SAVINGS ACCOUNT.

[510 ILCS 77/17]

- b) Upon a change in the ownership of a livestock management facility or livestock waste handling facility involving a lagoon, the new owner shall establish and maintain evidence of financial responsibility at the same level of surety as the previous owner.

Section 506.603 Level of Surety

- a) THE LEVEL OF SURETY REQUIRED SHALL BE DETERMINED BY RULE AND BE BASED UPON THE VOLUMETRIC CAPACITY OF THE LAGOON. [510 ILCS 77/17]
- b) Unless otherwise provided for by Board regulations, the Department may adopt and promulgate all procedures and criteria reasonably necessary to perform its duties and responsibilities under this Subpart.

SUBPART G: SETBACKS

Section 506.701 Applicability

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] and with the provisions of this Subpart.

Section 506.702 Procedures

- a) SETBACK CATEGORY SHALL BE DETERMINED BY THE DESIGN CAPACITY IN ANIMAL UNITS OF THE LIVESTOCK MANAGEMENT FACILITY. [510 ILCS 77/35(e)]
- b) 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)]
- c) In addition to the procedures specifically required under this Subpart, the Department may adopt and promulgate all procedures reasonably necessary to perform its duties and responsibilities under this Subpart.

Section 506.703 Penalties

- 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(b) 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].

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the _____ day of _____, 1996 by a vote of _____.

Dorothy M. Gunn, Clerk
Illinois Pollution Control Board