

ILLINOIS POLLUTION CONTROL BOARD

October 29, 1996

IN MATTER OF: )  
)  
EMERGENCY RULEMAKING: ) R 97-14  
LIVESTOCK WASTE REGULATIONS 35 ) (Rulemaking - Emergency)  
ILL. ADM. CODE 505 )

ADOPTED EMERGENCY RULE. FINAL ORDER.

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

This matter comes before the Board on a proposal for emergency rulemaking filed by the Illinois Department of Agriculture (Department of Agriculture) on October 15, 1996. The proposal is filed pursuant to Section 27 of the Environmental Protection Act (EPAAct) (415 ILCS 5/27 (1994)) and Section 5-45 of the Illinois Administrative Procedure Act (APAAct) (5 ILCS 100/5-45 (1994)). This proposal asks the Board to adopt emergency regulations that would immediately implement certain provisions of the Livestock Management Facilities Act (LMFAAct) (P.A. 89-456, eff. May 21, 1996) and also requests promulgation of specific rules pursuant to the LMFAAct.<sup>1</sup>

The Department of Agriculture submitted the emergency proposal because certain provisions of the LMFAAct, including design standards for livestock waste lagoons, would not go into effect until the Board adopted rules implementing the LMFAAct. Such Board action will occur after a six-month public hearing process that will follow the filing of Department of Agriculture's rulemaking proposal with the Board. That proposal is expected to be filed on November 21, 1996.<sup>2</sup> According to the Department of Agriculture, "the operation of existing livestock facilities and the development of future facilities without the necessary regulatory oversight to assure the protection of the state's natural resources that are included in the LMFAAct but will not be in effect until next year, has created a current situation which threatens the public interest, safety and welfare." The Department of Agriculture maintains

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<sup>1</sup> While the emergency proposal does not cite the LMFAAct for rulemaking authority and instead proposes these rules pursuant to the EPAAct, the Board notes that in actuality this proposal calls for immediate implementation of specific provisions of the LMFAAct.

<sup>2</sup> The LMFAAct sets forth a participative rulemaking process that is 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 LMFAAct. For the six-month period following the LMFAAct's passage, the Department of Agriculture is required to seek input from an Advisory Committee and propose a rule to the Board. That proposal is due November 21, 1996. The Board then has six months to hold public hearings on the proposed rule for filing with the Joint Committee on Administrative Rules. (See 89<sup>th</sup> Ill. Gen. Assem., Senate Proceedings, May 2, 1996 at 17, (statements of Senator Donahue).)

that without these specific regulations, the facilities in existence, or that begin construction or operation prior to May 1997, could "reasonably constitute a threat to the interest, safety or welfare of persons in various counties living in close proximity to such facilities."

On October 17, 1996 the Board invited interested members of the public, as well as the Advisory Committee for the LMFAct rulemaking (the Illinois Environmental Protection Agency, the Illinois Department of Public Health, and the Illinois Department of Natural Resources), to submit comments regarding the proposal by October 25, 1996. The Board has received over 100 public comments in this matter, including comments submitted by the four State agencies involved in the LMFAct rulemaking process.

For the reasons stated below, the Board finds, pursuant to Section 27(c) of the EPAct and Section 5-45 of the APAct, that a "situation exists which reasonably constitutes a threat to the public interest, safety or welfare" to the citizens of Illinois. This rule will become effective upon filing with the Secretary of State for a period of 150 days. The Board expects to file the rule immediately.

In adopting this emergency rule, the Board is cognizant of the legislative declaration that the livestock industry is vital to Illinois' economy and that it is the policy of Illinois, pursuant to the LMFAct, to maintain an economically viable livestock industry. We also acknowledge that Illinois farmers have played a vital role in Illinois' culture, tradition, and history. Moreover, in all Board rulemakings in recent years, we have strived for regulatory flexibility while at the same time providing for the protection and environmental integrity of our natural resources. Today is no exception to that policy. The Board has attempted to balance agricultural interests with the interests of the public in protecting Illinois' groundwater. With the influx of construction of larger livestock management facilities without specification for their design, Illinois' groundwater is at risk. We recognize that the risk is not to the groundwater alone, but to the public at large, to the neighbors of the facilities, and to the livestock producers themselves, who risk environmental liability for any pollution caused. While there are no guarantees against pollution and liability, the Board believes that the adoption of these emergency rules is a major step forward to the benefit of all citizens of Illinois.

#### RELEVANT STATUTORY PROVISIONS

Section 55 of the LMFAct (510 ILCS 77/55) specifically authorizes the Board to "adopt rules for the implementation of this Act in the manner provided for in Sections 27 and 28 of the [EPAct]" (see 415 ILCS 5/27, 5/28 (1994)). Section 27(c) of the EPAct provides:

When the Board finds that a situation exists which reasonably constitutes a threat to public interest, safety or welfare, the Board may adopt regulations pursuant to and in accordance with Section 5.02 [5 ILCS 100/5-45 (1994)] of the Illinois Administrative Procedure Act.

Section 5-45 of the APAct provides in pertinent part:

"Emergency" means the existence of any situation that any agency finds reasonably constitutes a threat to the public interest, safety, or welfare. If any agency finds that any emergency exists that requires adoption of a rule upon fewer days than is required by Section 5-40 and states in writing its reasons for that finding, the agency may adopt an emergency rule without prior notice or hearing upon filing of notice of emergency rulemaking with the Secretary of State under Section 5-70 . . . Subject to applicable constitutional or statutory provisions, an emergency rule becomes effective immediately upon filing under Section 5-65 or at a stated date less than 10 days thereafter. The agency's finding and a statement of the specific reasons for the finding shall be filed with the rule. The agency shall take reasonable and appropriate measures to make emergency rules known to the persons who may be affected by them.

An emergency rule may be effective for a period of not longer than 150 days, but the agency's authority to adopt an identical rule under Section 5-40 is not precluded.

Emergency rules are scrutinized by both the Joint Committee on Administrative Rules and by the courts to determine whether "there exists a situation which reasonably constitutes a threat to the public interest, safety or welfare." Citizens for a Better Environment v. Illinois Pollution Control Board, 162 Ill. App. 3d 105, 504 N.E.2d 166, 169 (1<sup>st</sup> Dist. 1987). Thus, before the Board may adopt emergency rules implementing the LMFAct, the Board must first determine that an emergency situation exists which requires the emergency adoption of rules.

#### Legislative Policy Statements of the LMFAct

In adopting the LMFAct, the Illinois General Assembly found that the enhancement of current regulations dealing with livestock management facilities was needed, and also recognized that the livestock industry was experiencing rapid changes and represented a major economic activity in Illinois' economy. (510 ILCS 77/5(a)(1), (2), (3).) Additionally, the General Assembly found that the trend in the livestock industry was for larger concentration of animals at a facility, resulting in a potential for greater impact on the immediate area. (510 ILCS 77/5(a)(4), (6).) Moreover, the General Assembly concluded that "livestock waste lagoons must be constructed according to standards to maintain structural integrity and to protect groundwater." (510 ILCS 77/5(a)(7).) The General Assembly further stated that:

it is the policy of the State of Illinois to maintain an economically viable livestock industry in the State of Illinois while protecting the environment for the benefit of both the livestock producer and persons who live in the vicinity of a livestock production facility.

(510 ILCS 77/5(b).)

Finally, the legislature also provided, at Section 100 of the LMFAct, that: “[n]othing in this Act shall be construed as a limitation or preemption of any statutory or regulatory authority under the [EPAct].” (510 ILCS 77/100.)<sup>3</sup>

### EMERGENCY JUSTIFICATION

Before the Board may adopt emergency rules implementing the LMFAct, we must first determine whether a situation exists that requires the emergency adoption of rules. Today, the Board finds that an emergency situation exists “which reasonably constitutes a threat to the public interest, safety, or welfare” requiring us to adopt specific rules for the emergency implementation of the LMFAct. The Board commends the Department of Agriculture for having the foresight to recommend this important set of rules for the protection of our environment and natural resources.

As the Department of Agriculture correctly noted in its statement of justification, the impetus for enactment of the LMFAct resulted, in part, from the recognition that the current trend in the livestock industry was for the construction of livestock management facilities designed to maintain larger concentrations of animals. In enacting the LMFAct, the legislature further found that the influx of these large management facilities created a potential for greater impact on the immediate area. As the Department of Agriculture also rightly observed, the legislature concluded current regulations needed to be modified in order to address these concerns and protect the environment, and accordingly, enacted the LMFAct.

The Board emphasizes that the LMFAct does not supplant the EPAct or rules or regulations promulgated thereunder. The EPAct prohibits the discharge or emission of any pollutant into Illinois air, water, or land by any person, business, or industry. (See 415 ILCS 5/9, 5/12, 5/21 (1994).) A salient principal under the EPAct is that any Illinois industry that generates waste assumes the risk, responsibility, and accountability for any pollution caused by that waste. Thus, livestock facilities that violate the provisions of the EPAct have always been and will continue to be responsible for any violations of the EPAct.

The Board recognizes that the public interest and good public policy require that pollution of our environment be averted prior to its generation. The Board has current regulations which are specific to livestock waste management facilities (see 35 Ill. Adm. Code 501 through 507: Subtitle E). However, the Board acknowledges that these regulations were

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<sup>3</sup> The EPAct, promulgated in 1970, is the comprehensive Illinois environmental statute that generally prohibits pollution by any person, business or industry. The EPAct has been amended numerous times over the past 26 years to include more programs and more provisions specific to individual pollution sources or environmental media, i.e., air, land, or water. Additionally, the EPAct created the Illinois Environmental Protection Agency to implement, enforce, and administer the law and all its programs and regulations. (See 415 ILCS 5/4 (1994).) The EPAct also created the Board to “determine, define and implement the environmental control standards” and adjudicate various types of environmental cases. (See 415 ILCS 5/5(b), (c) (1994).)

promulgated long before the current agricultural changes and trends found by the legislature in adopting the LMFAct. Therefore, although the Board has current regulations, they do not provide the specific design standards and requirements necessary for the construction and operation of these newer, larger livestock management facilities.

Without such new design standards to maintain the structural integrity of these facilities, the Board finds that the groundwater in Illinois is placed at serious risk. The pollution of groundwater could result in public water supply contamination, as well as the devaluation of a State resource. Moreover, because the design standards of the LMFAct are not effective until the Board adopts rules for the implementation of the LMFAct, the Board agrees with the Department of Agriculture that the immediate adoption of specific regulations tailored to the design of facilities with a large concentration of animals is necessary to ensure the protection of our valuable natural resources, specifically Illinois' groundwater.

In support of this finding, we note that the protection of Illinois' groundwater is of paramount concern in this State. The legislative floor debates concerning the LMFAct recognize this concern and thus evince an intention to protect the State's resources, especially its groundwater. Moreover, as the LMFAct states, "livestock waste lagoons must be constructed according to standards to maintain structural integrity and to protect groundwater." (510 ILCS 77/5(a)(7).)

The Illinois Groundwater Protection Act (IGPAct) (15 ILCS 55/1 *et seq.* (1994)) also illustrates the legislature's concern for the protection of the State's groundwater. The enactment of the IGPAct is as an outgrowth of the long-standing concern by the General Assembly and Illinois citizens that the State's rich and valued groundwater resources be protected. The IGPAct is a multi-faceted policy and program statement explicitly designed to provide protection for the groundwater and to assure the continued viability of the State's groundwater resources. Moreover, the IGPAct's policy statement provides:

[I]t is the policy of the State of Illinois to restore, protect, and enhance the groundwaters of the State, as a natural and public resource. The State recognizes the essential and pervasive role of groundwater in the social and economic well-being of the people of Illinois, and its vital importance to the general health, safety, and welfare. It is further recognized as consistent with this policy that the groundwater resources of the State be utilized for beneficial and legitimate purposes; that waste and degradation of the resources be prevented; and that the underground water resources be managed to allow for maximum benefit of the people of the State of Illinois.

(415 ILCS 55/2(b) (1994).)

Thus, the protection of Illinois' groundwater is a primary concern in this State, as evidenced by both the IGPAct and the legislative findings supporting the legislature's adoption of the LMFAct. Additionally, the Board has, for several years, developed and adopted

regulations to protect Illinois' groundwater, including groundwater quality standards pursuant to the IGPA Act.

As the result of Illinois' policy for the protection of its groundwater and the fact that inadequately constructed and operated livestock waste management facilities place the groundwater at risk, the Board concludes that it is necessary to adopt standards for the construction of these facilities to ensure the safety of Illinois' groundwater. Accordingly, the Board finds that the construction and operation of large livestock management facilities without specifically required and enforceable design standards constitutes "a threat to public interest, safety or welfare" to the citizens of the State of Illinois. The Board therefore adopts specific rules regarding lagoon registration, lagoon design criteria, and lagoon construction certification. The Board also adopts rules pertaining to livestock management certification and waste management plans.

The Board has previously addressed the need for emergency rules regarding lagoon design criteria, as these criteria are essential to protect the groundwater in Illinois. With regard to the registration and certification of livestock waste lagoons, the Board finds that emergency rules are necessary because registration under the LMFA Act is a prerequisite to applicability of design standards. Thus, the Board will adopt requirements for registration of newly constructed or modified livestock waste management lagoons that have not yet been placed into service.

The Board today also adopts emergency regulations requiring certification by the owner or operator of the livestock waste lagoon that the lagoon was constructed according to the standards adopted here and in the LMFA Act. Such a provision will provide a regulatory mechanism to ensure that lagoons are constructed to protect groundwater in Illinois.

The Board also adopts emergency regulations addressing the certification of livestock managers. Immediate adoption of regulations specifying the criteria for certification are required to implement certain provisions of the LMFA Act. Absent rulemaking which defines training and certification of livestock managers, the improper operation of a large livestock management facility jeopardizes our State's environment.

The Board further finds that the adoption of emergency regulations addressing waste management plans are necessary based on the emergency criteria. The LMFA Act allows operation of a livestock management facility for six months after the effective date of rules adopted to implement the LMFA Act. Such management plans will allow the livestock management facility and the Department of Agriculture to work together to develop a framework for the proper management and operation of the waste generated by these facilities that will be placed in service after the adoption of these rules. If waste management plans are not addressed in this emergency rule, the plans would not be required until six months after the effective date of the permanent rules. The Board also notes that Section 20(a) of the LMFA Act mandates that the livestock management facility owner or operator comply with requirements set forth in the rules adopted pursuant to the EPA Act concerning agricultural related pollution. (510 ILCS 77/20(a).)

An emergency rule, by its very nature, should address the specific concerns of the emergency. To this end, the Board notes that while the Department of Agriculture proposes registration of all existing facilities within 60 days of the adoption of these emergency rules, the Board does not believe that an emergency justification has been presented with regard to facilities which are completely constructed and are already in service prior to the adoption of these emergency rules. Moreover, as the Illinois Farm Bureau, Illinois Pork Producers Association, and Illinois Beef Association point out in their joint public comment, requiring registration of all facilities is contrary to the LMFAct.<sup>4</sup> Accordingly, the Board will require registration only for newly constructed or modified livestock waste management lagoons that have not yet been placed into service by the effective date of these emergency rules.

Given the context of this emergency as discussed above, the Board finds that an applicability threshold is necessary. Accordingly, the Board's rules will be applicable to large facilities with a design capacity for 300 animal units or greater. Pursuant to our rulemaking authority as specified in the LMFAct, the Board can, in considering the promulgation of rules pursuant to that act, "make distinctions for the type and size of livestock management handling facilities and operations." (510 ILCS 77/55(c).) Livestock management facilities with a design capacity of 300 animal units or more are recognized in both statute and regulation as facilities where greater regulatory oversight is needed to protect the environment.

As stated previously, the Illinois General Assembly found that the trend for larger numbers of animals at livestock management facilities and the concomitant potential for greater impacts on the surrounding area were major reasons for enacting the LMFAct. The Board also notes that the LMFAct requires livestock management facilities with a design capacity of 300 animal units or more to have an owner or operator who is a certified livestock manager. Additionally, the Board's Subtitle E agricultural regulations define a livestock waste facility with 300 animal units as a "large" facility requiring special consideration.

Since the emergency as delineated is that large livestock waste facilities will be building large lagoons without adequate design standards, safeguards, and related operational criteria to protect groundwater, the Board does not believe it is appropriate to go beyond the scope of the emergency by requiring any small or medium-sized farmer within the next 150 days to be subject to these regulations. Given the statutory definitions of lagoon, such would be the

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<sup>4</sup> Section 15(b) of LMFAct provides that: "Lagoons constructed prior to the effective date of rules adopted for the implementation of this Act may register with the Department at no charge." (510 ILCS 77/15(b).) Section 15(c) of the LMFAct states that: "Any earthen livestock waste lagoon in service prior to the effective date of the rules for implementation of this Act is not subject to registration but is only subject to the complaint procedures." (510 ILCS 77/15(c).)

situation if we did not establish a minimum threshold of applicability for these emergency rules.<sup>5</sup>

While it is the Board's intent to provide a flexible and balanced rule, we recognize that some may disagree with our delineation set forth in our emergency determination. We today find this threshold necessary for purposes of emergency rulemaking. The Board recognizes and expects, however, that both the 300 animal unit threshold and its specific application may be revisited in the permanent rulemaking proceedings.

In sum, the Board is implementing only those portions of the LMFAct which are justified by the stated emergency. Accordingly, pursuant to our authority under Section 27(c) of the EPAct (415 ILCS 5/27(c) (1994)) and Section 55 (510 ILCS 77/55 (1994)) of the LMFAct, and as justified by the emergency found and presented, we today adopt emergency rules for the immediate implementation of portions of the LMFAct.

### DISCUSSION OF COMMENTS RECEIVED

In response to the Board's October 17, 1996 order, we have received an overwhelming number of well considered comments which we have reviewed carefully. We greatly appreciate the comments and we will, generally, discuss them below.

In reaching our determination, the Board has substantially reviewed the Department of Agriculture's emergency rule proposal with accompanying technical documents, as well as the technical information contained in prior Board proceedings.<sup>6</sup> We were also grateful for the aid provided by the comments received by the Advisory Committee of the LMFAct. We wish to acknowledge the technical expertise provided by the natural resource agencies comprising the Advisory Committee: the Illinois Environmental Protection Agency, the Department of

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<sup>5</sup> If a modification would expand the facility design capacity to 300 animal units or more, then the provisions of this emergency rule would, in fact, apply.

<sup>6</sup> See Board opinions and orders adopted in R88-7, R89-5, R89-14, R92-20 and R93-27, all of which relate, among other things, the contents of the extensive public comment and hearing record amassed in each proceeding. (Groundwater Protection: Regulations for Existing and New Activities Within Setback Zones and Regulated Recharge Areas (35 Ill. Adm. Code 601, 615, 616 and 617) ("Technical Standards"), R89-5 December 6, 1991; Groundwater Quality Standards (35 Ill. Adm. Code 620, R89-14(B) November 7, 1991; Groundwater Quality Standards: Amendments to 35 Ill. Adm. Code 303, 616, and 620, R89-14(C) September 3, 1992; Amendments to 35 Ill. Adm. Code 615 and 616 (Groundwater); Exceptions for Pesticide and Fertilizer Facilities, R92-20 January 21, 1993; Groundwater Protection: Amendments to Groundwater Quality Standards (35 Ill. Adm. Code 620), R93-27 August 11, 1994; Amendments to 35 Ill. Adm. Code 810.103 (Solid Waste Disposal General Provision) Concerning On-Farm Disposal of Dead Animals, R95-9 September 21, 1995.) The Board will also look to the opinion and orders which adopted the regulations at 35 Ill. Adm. Code 501 through 504. All of these opinions and orders are incorporated in this proceeding by reference.



Natural Resources (with special appreciation to the assistance of the Illinois State Geological Survey (ISGS), Illinois State Water Survey, and the Office of Scientific Research and Analysis contained within the Department of Natural Resources), the Department of Public Health, and the Department of Agriculture. These agencies provided comments that were well-founded, substantive, technically supported, and quite helpful in our determination. The four agencies all urged the Board to adopt the emergency rule, with certain modifications that will be specifically addressed in the section of this opinion titled Adopted Board Rule.

In addition to reviewing the comments submitted by the Advisory Committee, the Board also studied the remaining public comments received. Due to the substantial number of comments filed, the Board will not summarize every comment. However, the Board is greatly appreciative of the positions articulated in these statements. Generally, the comments fall into four categories: 1) comments that specify suggestions for changes in the proposed rule; 2) general comments in support of the Department of Agriculture's proposal; 3) general comments that oppose the proposal and seek stricter regulation of livestock waste; and 4) general comments that neither support nor oppose the Department of Agriculture's proposal.

The Board received over 20 comments that support the Department of Agriculture's proposal and urge the Board to adopt the proposal, with certain changes. These comments include several letters that support the Illinois Pork Producers Association, the Illinois Beef Association, and the Illinois Farm Bureau's joint comments and suggested changes. The Board also received comments from the Illinois Environmental Council and the Illinois Stewardship Alliance who made specific suggestions for changes in the proposed rule. Many other interested persons expressed concerns about the issue of large hog farms being developed in the State. These comments urged strict regulations of such operations, but generally did not express a position on the proposal.

Two comments were filed by local public officials. The Chairman of the Pike County Board, who protested the Board's short comment period, stated that affected counties had not been specifically served with the Department of Agriculture's proposed rules for comments, and indicated a concern with the statutory definition of "populated area" and the set back requirements. A letter from the Chairman of the Peoria County Board advocated that legislative action be taken to place a moratorium on large-scale, industrial livestock operations for a one-year period so that appropriate rules and regulations could be adopted to protect Illinois' citizens. The comment was submitted by another member of the Peoria County Board, a farmer, who provided the Board with a video tape advocating a new technology for livestock waste management facilities being developed in North Carolina that would negate the use of lagoons entirely.

The Board also received over 50 comments that opposed the Department of Agriculture's proposal and sought stricter regulation of livestock waste. The comments in this category ranged from placing a moratorium on construction of hog facilities to requirements for local siting approval prior to construction of a "mega-farm." The following is a list of suggestions that were generally included in this category of comments:

1. Public hearings and siting approval prior to construction;
2. Permitting of facilities and greater involvement of Illinois Environmental Protection Agency;
3. Odor control;
4. An indemnity fund to provide for site cleanup;
5. Setbacks; and
6. A moratorium on facilities/alternatives to lagoons.

The Board has not addressed any issues which go beyond the scope of the emergency proposal and, as explained earlier, the emergency context. Certain issues of major concern to the public were not presented in the emergency proposal and involve technical issues too expansive to adequately be dealt with in the 12-day period we had available to review and adopt this emergency rule. Of course, one such major issue is how to manage the odor caused by large livestock management facilities. We understand and share the concerns presented in the public comments, but cannot adequately address the problems caused by odor from livestock waste facilities in an emergency rule context. Likewise, issues surrounding the creation of an indemnity fund to provide for site remediation were not presented in the proposal. In any event, the issue is far too complex to quickly and adequately consider in an emergency rulemaking context. Nonetheless, the Board fully expects to review these issues upon the filing of the Department of Agriculture's permanent rule proposal.

Also, many concerns raised by the public could not be dealt with in any rulemaking of the Board (such as a moratorium), because they addressed issues that would, for one reason or another, require legislative changes to the LMFAct. While the Board understands those concerns, the Board also realizes that any rules adopted must fall within the limits provided by statute and cannot contravene the specific language of any act. With this in mind, many of the suggestions contained in the public comments (such as local government siting prior to construction of these facilities, a general moratorium on the building of large livestock waste facilities, extension of the emergency rule beyond 150 days, different setback requirements, and a different definition of "populated area") would require legislative action.

The Illinois Environmental Council (IEC) filed a public comment on October 23, 1996. IEC limited its comment to Subpart C, the waste management plans proposed by the Department of Agriculture. IEC commented that Subpart C should be amended so that waste management plans would be based on not only nitrogen, but phosphorus as well. The IEC provided several reasons to include phosphorus in the waste management plan and attached a lengthy bibliography listing some of the articles which support its inclusion. However, IEC did not provide a methodology for determining the proper application rate of livestock waste containing phosphorus. Given the short time the Board has had to review the proposal, we will not include phosphorus in the emergency rule. However, including phosphorus in the waste management plan may be considered during the general rulemaking where the Board will have the benefit of developing the record regarding phosphorus.

The Board received public comments from the Illinois Stewardship Alliance (Alliance) filed on October 25, 1996. The Alliance states that the proposal should not be adopted by the

Board. The Alliance further states that the proposal would allow large-scale livestock facilities to continue construction without the more detailed rules provided for by the LMFAct. Specifically, the Alliance states that the lagoon design standards, groundwater measures, and the application rates for livestock waste based on the agronomic rate of nitrogen usage by crops, as proposed, do not adequately protect public health, safety, or welfare. Further, the Alliance believes that the rules should include measures to reduce the odor. The Alliance states that synthetic liners, borrowed clay, or clay/bentonite mixtures will not adequately protect the public health, safety, or welfare in areas with high sensitivity to contamination by nitrate leaching. The Alliance believes that in addition to the failure of appropriate lagoon liners, the groundwater monitoring rules should require the installation and location of four monitoring wells based on the water table and not the lagoon floor. If the proposal is adopted, the Alliance believes that the application of livestock waste should be based on crop usage of phosphorus and nitrogen. As noted above, in response to the IEC comment, the Board may consider including phosphorus in waste management plans in the general rulemaking and we anticipate these comments will be renewed at that time. Additionally, the Board has adopted liner standards, different than those proposed by the Department of Agriculture, which we believe address the emergency identified in this proceeding.

A joint comment was filed by the Illinois Farm Bureau, the Illinois Pork Producers Association, and the Illinois Beef Association. The joint comment supports adoption of the emergency rule. The joint comment indicates that if the waste lagoon is not self-sealing then a synthetic liner or clay liner may be required to protect the ground water. The Board has already incorporated amendments, specifically at Section 505.202(b), 505.205 and 505.206, that provide groundwater protection as intended by joint comment. Regarding self-sealing of the waste lagoon, the Board believes that self-sealing may be better addressed under general rulemaking where the Board may develop the record on the self-sealing issue.

The joint comment also suggests that Section 505.203 regarding holding pond design standards should be deleted and replaced with a reference to 35 Ill. Adm. Code 570. The rules at 35 Ill. Adm. Code 570 do not address the holding pond design. However, the Board notes that holding ponds are regulated under 35 Ill. Adm. Code 501, specifically Section 501.404. We will not follow their suggestion to amend Section 505.203. The joint comment also raises several interesting issues regarding lagoon and holding pond registration certification. The Board anticipates that these issues will be addressed in the general rulemaking.

Accordingly, the Board is not regulating holding ponds in this rulemaking. The LMFAct does not define holding ponds and does not specifically require that holding ponds meet the standards in the LMFAct. As pointed out by the Farm Bureau *et al*'s comment, holding ponds are regulated under 35 Ill. Adm. Code: Subtitle E. Therefore, the Board believes that additional regulation of holding ponds pursuant to the LMFAct is better discussed in the upcoming permanent rulemaking.

#### ADOPTION OF BOARD RULE

The Board today adopts an emergency rule that sets forth specific design standards for the construction and modification of livestock waste lagoons. The design standards are promulgated to provide protection for Illinois' groundwater and are based upon site-specific characterizations. Owners and operators of facilities with a design capacity of 300 animal units or more, who are modifying their facilities or who are constructing facilities that are not yet in service will be required to do soil borings prior to construction to ascertain the geological character of the site. The site characterizations will have to be certified by a licensed professional engineer. Livestock waste lagoons will be required to have liners and conduct groundwater monitoring or to just have a liner depending on the proximity to aquifer material. Where a liner is required, a licensed professional engineer must certify to its adequacy. The emergency rule also puts into place various necessary provisions of the LMFAct.

### SUBPART A: GENERAL PROVISIONS

#### Applicability (Section 505.101)

This section generally defines the applicability of the rules.

#### Severability (505.102)

The Board includes a section in the emergency rule which addresses the severability of the provisions of the rule. This type of section is routinely included in Board rulemakings.

#### Definitions and Incorporations by Reference (Sections 505.103 and 505.104)

The sections dealing with the definitions and incorporation by reference in the emergency rules are essentially the same as those in the Department of Agriculture's proposal, except for some additions and minor changes. The sections have been rearranged and given new section numbers. The definitions are set forth under Section 505.103, and the incorporations by reference are included under Section 505.104.

The changes to the definition section of the Department of Agriculture's proposal include a clarification regarding the applicability of the definitions, the addition of three new definitions, and minor corrections. As pointed out by the Department of Agriculture and the Environmental Protection Agency, some of the proposed language found at Section 505.103 conflicts with definitions in 35 Ill. Adm. Code Subtitle E. Accordingly, we have clarified the applicability of Section 505.103 to state that the definitions apply only to the emergency rule.

The three new definitions are for "Aquifer Material," "Licensed Professional Engineer", and "Placed in Service." We are including the definition of "aquifer material," as suggested by the Department of Natural Resources/Illinois State Geological Survey, since the design standards prescribed in the instant regulations incorporate the site investigation

methodology it recommended. A discussion of that methodology and what constitutes an “aquifer material” may be found under Section 505.204.

The Board rules will require engineer certification under Part 505. Accordingly, we are defining the term licensed professional engineer and the definition is drawn from Section 57 of EPAct. Finally, the Board regulations add a definition of the phrase “Placed in Service.” This phrase, which is drawn from the LMFAct, has been used in the Board proposal to clarify the applicability of the regulations. The Board proposal at Section 505.103 defines “placed in service” to mean when livestock waste is placed in a lagoon upon the completion of construction or modifications.

The Board proposal also includes minor corrections to the definitions of “Modified,” “Lagoon,” “Livestock Management Facility,” and “New Facility,” in response to comments submitted by the Environmental Protection Agency and the Department of Agriculture. The definition of the term “lagoon” is clarified to indicate that an earthen livestock waste lagoon and livestock waste lagoon are the same. As suggested by the commentors, the reference to “Act” in the definitions of “Livestock Management Facility” and “New Facility” has been changed to “the Livestock Management Facilities Act.” The Board amended the definition of “Modified” to include the change in design capacity of livestock management facilities.

In the definition of “animal unit,” the Board did not add the specific language proposed in the Department of Agriculture’s public comment regarding the calculation of animal units at a facility. Instead, for clarification purposes, the Board includes language which addresses that comment in the appropriate applicability sections.

Regarding incorporation by reference, the Board regulations do not include the reference to the ISGS Report entitled “Potential for Agricultural Chemical Contamination of Aquifers in Illinois: 1995 Revision,” (ISGS Report) which was referenced in the Department of Agriculture’s proposal as justification for site-sensitivity. The Board rules do not rely on the methodology specified in that report to determine the site-specific characterizations which are provided for in the Board emergency rule. Also, the Board rules incorporate the changes suggested by the Department of Agriculture concerning the United States Department of Agriculture publication. Finally, a requirement has been added at Section 505.103 that states that the incorporations do not include later amendments or editions.

## **SUBPART B: STANDARDS FOR LIVESTOCK WASTE LAGOONS**

### **Applicability (Section 505.201)**

As discussed earlier, we have limited the scope of the rule proposal submitted by the Department of Agriculture by directing the focus of the rules to capture the essence of the emergency. First, we have limited the application of the design criteria to “large” livestock management facilities which, for purposes of the emergency rules, we have determined to be those with a design capacity for 300 or more animal units as defined in the LMFAct. Second, we do not require registration for facilities which have been placed in service prior to the

effective date of these emergency rules. The Board has also added language which clarifies that modification of an existing livestock management facility to increase design capacity to 300 animal units or more would subject the modification to these rules.

#### Site Investigation (Section 505.202)

Section 505.202 of the emergency rules sets forth the requirements for obtaining site-specific information which will be required for the site-specific characterization provided for in the Board rules. Essentially, the site investigation involves the determination of whether aquifer material is located within 50 feet of the planned bottom of the lagoon, based on the collection of one or more continuous borings.

Finally, the site investigation provisions require a licensed professional engineer certification. In this regard, both the Environmental Protection Agency and the Department of Natural Resources suggest that the regulations require certification by qualified professionals regarding the specifications of site characterization, design and construction of lagoons.

#### Registration (505.203)

The proposal requires registration of a facility, accompanied by a \$50 registration fee and certification by the supervising licensed professional engineer that the site investigation meets the criteria of this section.

#### Lagoon Design Standards (Section 505.204)

The Board rules require liners and groundwater monitoring for lagoons depending on site-specific characterizations which must be completed and certified prior to placing any new lagoon in service. The rules contain a substantive change in the methodology used to determine site-specific characterization which will determine whether a liner or groundwater monitoring, or both, will be necessary. Additionally, the Board rules prescribe more detailed requirements for liners and groundwater monitoring. The proposal also includes nonsubstantive format changes, that involve the relocation of the standards for liners and groundwater monitoring under separate sections.

The Department of Agriculture's proposal would have required liners and groundwater monitoring for lagoons only if the lagoon is located in an area with aquifer sensitivity rating of "excessive" or "high." The aquifer sensitivity was to be determined in accordance with an ISGS Report entitled "Potential for Agricultural Chemical Contamination of Aquifers in Illinois: 1995 revision" (ISGS Report). However, the ISGS Report was developed to predict in very general terms the sensitivity of Illinois aquifers to contamination through the agricultural use of fertilizers and pesticides at agronomic rates.

We share the concerns raised by the Environmental Protection Agency and the Department of Natural Resources regarding the use of the proposed ISGS methodology to decide when to require liners and groundwater monitoring as a part of the lagoon and holding

pond design standards. Specifically, as the Environmental Protection Agency noted, the ISGS Report incorporated by the Department of Agriculture's proposal contains a caveat that the nitrate leaching soil maps not be used for evaluation of areas smaller than a township (approximately 36 square miles). We agree with the Department of Natural Resources that the use of the ISGS Report is not appropriate to determine when a liner or monitoring wells should be required on livestock waste lagoons. In this regard, the Department of Natural Resources has proposed an alternative methodology to decide when to use liners or monitoring wells. The Environmental Protection Agency has recommended Board adoption of this methodology. The Environmental Protection Agency believes that the proposed alternative by the Department of Natural Resources is both technically supportable and reasonably justified since it involves a site-specific determination based upon the distance between the depth of the lagoon bottom to the aquifer material.

The methodology proposed by the Department of Natural Resources is based on the proximity of the "aquifer material," that allows the flow of liquid contaminants without significant resistance over relatively long distances, to the bottom of the lagoon. The Department of Natural Resources notes that its alternative methodology is highly protective of groundwater, while allowing for quick field determination. The Department of Natural Resources also notes that this option is less expensive than a thorough subsurface hydrogeologic evaluation.

The Department of Agriculture states that the methodology it proposed provides a simplified process in which the "owner or operator" has the responsibility to evaluate the vulnerability of a site through either the use of published ISGS information or through the use of other site-specific information. However, the Department of Agriculture admits that the methodology has certain limitations. The Department of Agriculture maintains that any changes to the process should involve the improvement or augmentation of the methodology proposed in its proposal.

Based on the review of the comments, as well as its own technical review, the Board finds that the procedures and methodology prescribed in the Department of Agriculture's proposal that are based on the ISGS Report are inappropriate for classifying areas sensitive to groundwater contamination from waste treatment or disposal sites. As noted above, the ISGS Report itself cautions against the use of the information on a site-specific basis. Further, when evaluating the groundwater impact of a land-based waste treatment facility such as a livestock waste lagoon consideration must be given to site-specific hydrogeologic information and design factors such as waste loading rates and operating head on the bottom of the lagoon. These factors which affect the quantity and quality of leachate migrating to groundwater from a lagoon are not considered in classifying aquifer sensitivity. In view of this, an aquifer sensitivity assessment based on the ISGS Report proposed by Department of Agriculture is not appropriate to decide when to require liners or groundwater monitoring for livestock waste lagoons. Such a determination must be based on a site-specific hydrogeologic site investigation and certain lagoon design criteria.

In order to address the concerns regarding the Department of Agriculture's proposal, the Board initially looked to the requirements for a hydrogeologic site investigation based upon methodology similar to that found in the Board's current landfill or Underground Storage Tank regulations to determine when a liner would be required to ensure groundwater protection. However, the degree of detail specified which would be required for those methodologies may be problematic for some livestock waste handling facilities. Another option considered was to require liners and groundwater monitoring at all lagoons. Such approach, however, would be economically unreasonable as liners may not be technically necessary at some sites.

In view of the above, the Board finds that the alternative methodology proposed by the Department of Natural Resources offers a reasonable approach for determining when a liner or groundwater monitoring is necessary. While this methodology can, of course, be revisited in the general rulemaking, the Board, for the purposes of the emergency rulemaking, finds that the Department of Natural Resources' alternative methodology adequately and justifiably addresses the environmental concerns raised. Moreover, we find that it provides a reasonable and workable approach for determining the environmentally necessary requirements for livestock waste lagoon, based upon site-specific characterizations, while ensuring groundwater protection.

Accordingly, the Board regulations include a new requirement at Section 505.204(c) that directs an owner or operator to determine if a liner and groundwater monitoring is required for a livestock waste lagoon in accordance with site investigation requirements, that are detailed at Section 505.202.

#### Liner Standards (Section 505.205)

The Board emergency rules incorporate the liner standards proposed by the Department of Agriculture for in-situ soil liners, clay or clay/bentonite liners and synthetic liners at section 505.205. These standards include specifications for liner thickness (2 feet), hydraulic conductivity ( $10^{-7}$  cm/sec) and a requirement that a liner shall be constructed in lifts not to exceed 6 inches in thickness.

The Environmental Protection Agency suggested that the Board consider the application of the Board's landfill liner requirements to address the construction of earthen liner. In this regard, we note that design criteria proposed by the Department of Agriculture are appropriate for earthen liners. The Board rule will include standards for construction of liners; however we will not apply the entirety of the Board's landfill requirements. Again, we emphasize that these standards do not change the design criteria proposed by the Department of Agriculture, but rather provide additional specificity for the design and construction of the liners.

Regarding the clay, clay/bentonite, or in-situ soil liner, the additional requirements specify that (1) the liner must be designed to function for the entire design period of the facility; and (2) liner construction and compaction must reduce void spaces and allow the liner to support the loadings imposed by the waste without settling. With regard to synthetic liner,



the second option requires (1) the manufacturers to certify that the liner material is compatible with supporting soil material; (2) the liner to be supported by a compacted base free from sharp objects; (3) the liner to have sufficient strength and durability to function during the design period by withstanding waste loadings, settlement, and changes in temperature; and (4) the liner be constructed according to the manufacturer's specifications.

Finally, the Board proposal requires the construction or installation of liners to be conducted under the supervision of a licensed professional engineer. Further, the regulations require that the supervising licensed professional engineer certify that the liner meets all the liner requirements. As to this issue, both the Environmental Protection Agency and the Department of Natural Resources recommend that the emergency rules require the review and approval of design and construction specifications by a qualified party, preferably a registered engineer. We conclude that it is reasonable to require a certification by a licensed professional engineer concerning design and construction, since licensed professional engineer certification is appropriate and commonly used in other Board regulations concerning liner designs, site investigation and groundwater monitoring to ensure compliance with the standards.

#### Groundwater Monitoring (Section 505.206)

The groundwater monitoring requirements proposed by the Department of Agriculture require an owner or operator to install at least three monitoring wells located adjacent to the lagoon or install and operate an alternative groundwater monitoring program approved by the Department of Agriculture. Additionally, the Department of Agriculture's proposal requires that the monitoring wells be sampled on a quarterly basis and that the samples be analyzed for nitrate-nitrogen, phosphate-phosphorus, chloride, organic carbon, sulfate, ammonia-nitrogen, Escherichia coli, and fecal coliform or fecal strep.

The Department of Agriculture's proposal lacks necessary specificity regarding installation and placement of these wells. Both the Environmental Protection Agency and the Department of Natural Resources have expressed concerns regarding the proposed monitoring well standards. The Environmental Protection Agency recommends that rules specify well location and depth, screened interval, and installation procedures. Specifically, the Environmental Protection Agency suggests that the well depth be set at the seasonal low water table, a five (5) foot screened interval with seven (7) feet of compacted sand, and a location as close to the toe of the lagoon berm as practical. They also recommend that the final rules cross-reference 77 Ill. Adm. Code 920.170 for installation procedures. Finally, the Environmental Protection Agency recommends that the location of monitoring wells be based on the local groundwater conditions with at least two (2) wells downgradient of the lagoon or holding pond. The Department of Natural Resources also makes similar recommendations.

Upon review of the comments and the Department of Agriculture's proposal, we find that additional requirements are warranted for designing a groundwater monitoring system intended for detecting releases from a waste lagoon. The Board therefore specifies minimum requirements concerning monitoring well location, screening depth, and installation procedures in the emergency rules.

Certification of Design Standards (505.207)

The Board proposal includes the requirement from the LMFAct that the Department of Agriculture shall inspect an earthen livestock waste lagoon at least once during preconstruction, construction, or post-construction and may require modifications where necessary.

The Board proposal requires that a licensed professional engineer certify that the liner meets the standard of this section prior to placing the lagoon in service. Further, the lagoon may not be placed in service earlier than ten days after submittal of the certification.

Failure to Register or Construction Accordance with Standards (505.208)

This section specifies the consequences if an owner or operator of any livestock waste lagoon subject to registration fails to comply with the standards in Part 505. The Board's rule closely follows the statutory language of the LMFAct and the Department of Agriculture's proposed rule.

SUBPART C: WASTE MANAGEMENT PLANS

The Board has adopted the Department of Agriculture's proposal regarding waste management plans with only minor nonsubstantive changes. The Board notes that we received several comments on this portion of the proposal and those comments generally supported adoption of this provision. We do believe that there are issues which will need to be addressed in a permanent rulemaking on these provisions.

SUBPART D: CERTIFIED LIVESTOCK MANAGER

The Board will adopt the provisions proposed by the Department of Agriculture regarding certification of livestock managers with only minor nonsubstantive changes. We have reflected that the LMFAct requires a livestock manager certification for facilities designed for 300 animal units or more. We do note that the Department of Agriculture may wish to address how certifications, obtained under the emergency rule, will be accepted under the permanent regulations, which could differ from these emergency rules.

CONCLUSION

The Board adopts provisions, pursuant to the LMFAct, which will provide design criteria for lagoons, registration of lagoons, and site investigations prior to placement of lagoons. These proposals will ensure protection of groundwater in the State. In addition, the Board adopts provisions that relate to the operation of livestock facilities including requirements for livestock management plans and certification of livestock managers. These rules will insure that provisions of the LMFAct, which are already in effect, can be implemented fully and completely during this emergency. This is an emergency rule and, as such, will be effective for 150 days, and the Board is prohibited by statute from adopting an

extension or second emergency rule. (5 ILCS 100/5-45 (1994).) Thus, the Board notes that there may be a gap between expiration of this emergency rule and the adoption of permanent rules.

The Board is not proceeding, in this emergency rule, with the adoption of regulations regarding holding ponds, financial assurance, phosphorus content of applied waste, closure requirements, or odor management. These issues along with others, such as how registration and certification under these rules will be handled, should be addressed in permanent rules. The Board reiterates that adoption of a provision in this emergency rule does not foreshadow adoption of the exact provision in a permanent rule. The Board expects that the record will be much more extensive in the future rulemaking. Other decisions could be made. The Board urges the Department of Agriculture and the Advisory Committee to consider this when proposing the permanent rule.

### ORDER

The Board directs the Clerk to cause the filing of the following emergency rule with the Secretary of State Administrative Code.

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

#### PART 505 LIVESTOCK WASTE REGULATIONS

#### SUBPART A: GENERAL PROVISIONS

Section	
505.101	Applicability
505.102	Severability
505.103	Definitions
505.104	Incorporations by Reference

#### SUBPART B: STANDARDS FOR LIVESTOCK WASTE LAGOONS

Section	
505.201	Applicability
505.202	Site Investigation
505.203	Registration
505.204	Lagoon Design Standards
505.205	Liner Standards
505.206	Groundwater Monitoring
505.207	Certification of Construction
505.208	Failure to Register or Construct in Accordance with Standards

### SUBPART C: WASTE MANAGEMENT PLANS

Section	
505.301	Purpose
505.302	Scope and Applicability
505.303	Waste Management Plan Contents
505.304	Livestock Waste Volumes
505.305	Nutrient Content of Livestock Waste
505.306	Adjustment to Nitrogen Availability
505.307	Optimum Crop Yields
505.308	Crop Nutrient Requirements
505.309	Nitrogen Credits
505.310	Records of Waste Disposal
505.311	Approval of Waste Management Plans
505.312	Penalties

### SUBPART D: CERTIFIED LIVESTOCK MANAGER

Section	
505.401	Applicability
505.402	Training Sessions
505.403	Examinations
505.404	Methods of Certification
505.405	Training Materials and Training Fees

**AUTHORITY:** Authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/27] and implementing the Livestock Management Facilities Act [P.A. 89-456, effective May 21, 1996, 510 ILCS 77/1 *et.seq.*].

**SOURCE:** Emergency amendment adopted in R97-14 at 20 Ill. Reg. \_\_\_\_\_, effective \_\_\_\_\_.

**NOTE:** Capitalization denotes statutory language.

#### Section 505.101      Applicability

This Subpart shall apply to 35 Ill. Adm. Code 505. The applicability of Subpart B, Standards for Livestock Waste Lagoons, is set forth in Section 505.201 of this Part. The applicability of Subpart C, Waste Management Plans, is set forth at Section 505.302 of this Part. The applicability of Subpart D, Certified Livestock Manager, is set forth at Section 505.401 of this Part.

#### Section 505.102      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 505.103      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.

“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.

**“ANIMAL UNIT” MEANS A UNIT OF MEASUREMENT FOR ANY ANIMAL FEEDING OPERATION CALCULATED AS FOLLOWS:**

- 1)      BROOD COWS AND SLAUGHTER AND FEEDER CATTLE MULTIPLIED BY 1.0.
- 2)      MILKING DAIRY COWS MULTIPLIED BY 1.4.
- 3)      YOUNG DAIRY STOCK MULTIPLIED BY 0.6.
- 4)      SWINE WEIGHING OVER 55 POUNDS MULTIPLIED BY 0.4.
- 5)      SWINE WEIGHING UNDER 55 POUNDS MULTIPLIED BY 0.03.
- 6)      SHEEP, LAMBS, OR GOATS MULTIPLIED BY 0.1.
- 7)      HORSES MULTIPLIED BY 2.0.
- 8)      TURKEYS MULTIPLIED BY 0.02.
- 9)      LAYING HENS OR BROILERS MULTIPLIED BY 0.01 (IF THE FACILITY HAS CONTINUOUS OVERFLOW WATERING).
- 10)    LAYING HENS OR BROILERS MULTIPLIED BY 0.03 (IF THE FACILITY HAS A LIQUID MANURE HANDLING SYSTEM).

## 11) DUCKS MULTIPLIED BY 0.02.

(510 ILCS 77/10.10.)

“Aquifer material” means carbonate or sandstone bedrock of any thickness; or sand 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 505.202 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.)

“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 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. (510 ILCS 77/10.60.)

“Sand” means unconsolidated materials where 70% or more of the particles are of size 0.05 millimeters to 2.00 millimeters, 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 textures.

“Sand and gravel” means unconsolidated materials that contain a matrix (particles of 2 mm or less) that is consistent with the above definition of “sand” and particles larger than two millimeters in size.

#### Section 505.104      Incorporations by Reference

- a)      The Board incorporates the following materials by reference:
  - 1)      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.
  - 2)      MWPS. MidWest Plan Service, Iowa State University, Ames, Iowa 50011-3080 (515) 294-4337, “Livestock Waste Facilities Handbook”, MWPS-18, 3<sup>rd</sup> Edition, 1993.
  - 3)      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.

- 4) University of Illinois at Urbana-Champaign, Office of Agricultural Communications and Education, 67X Mumford Hall, 1301 West Gregory Drive, Urbana, Illinois 61801 (217) 333-2007, "Illinois Agronomy Handbook 1995-1996", Circular 1333, 1994, 201 p.
- b) This Section incorporates no later amendments or editions.

#### SUBPART B: STANDARDS FOR LIVESTOCK WASTE LAGOONS

##### Section 505.201      Applicability

- a) This Subpart applies to any lagoon that:
  - 1) Is located at a livestock management facility that has a maximum design capacity of 300 animal units or more; and
  - 2) 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 one-time maximum design capacity of that livestock management facility.

##### Section 505.202      Site Investigation

- a) The owner or operator of a 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, at a minimum, perform one or more soil borings 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; and
  - 3) Soil borings shall be continuous to ensure that no gaps appear in the sample column.

- c) **THE OWNER OR OPERATOR OF THE EARTHEN LIVESTOCK LAGOON MAY, WITH APPROVAL FROM THE DEPARTMENT, MODIFY OR EXCEED THESE STANDARDS IN ORDER TO MEET SITE SPECIFIC OBJECTIVES. (510 ILCS 77/15(a).)**
- d) **The site investigation in accordance with this Section shall be conducted under the direction of a Licensed Professional Engineer. Upon completion of site investigation, the supervising Licensed Professional Engineer shall certify that the site investigation meets all the applicable requirements of this Section, and whether aquifer material is present (or not present) within 50 feet of the planned bottom of the lagoon in accordance with Section 505.203 of this Part.**

**Section 505.203      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;**
  - 4) **SPECIFIC LOCATION INFORMATION (noted on a facility site map):**
    - A) **DISTANCE TO THE NEAREST PRIVATE OR PUBLIC POTABLE WELL;**
    - B) **DISTANCE TO THE NEAREST OCCUPIED PRIVATE RESIDENCE (OTHER THAN ANY OCCUPIED BY THE OWNER OR OPERATOR);**
    - C) **DISTANCE TO THE NEAREST STREAM; AND**
    - D) **DISTANCE TO THE NEAREST POPULATED AREA;**

- 7) ANTICIPATED BEGINNING AND ENDING DATES OF LAGOON CONSTRUCTION;
- 8) TYPE OF LIVESTOCK AND NUMBER OF ANIMAL UNITS;
- 9) A certification by the supervising Licensed Professional Engineer, accompanied by supporting justification and data, certifying that the site investigation meets all the applicable requirements of Section 505.202 of this Part, whether aquifer material is present (or not present) within 50 feet of the planned bottom of the lagoon; and
- 10) 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 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. (510 ILCS 77/15(b).)

**Section 505.204 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 (510 ILCS 77/15(a)):
  - 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 505.104 (510 ILCS 77/15(a)); and
  - 2) The additional design standards specified in subsections (c) through (g) of this Section.

- 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 505.202 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 in-situ soil liner, a borrowed clay, clay/bentonite mixture or a synthetic liner meeting the requirements of Section 505.205 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 505.206 of this Part.
- g) Any livestock waste lagoon subject shall meet or exceed the following:
  - 1) Earthen walls shall have side slopes not to exceed a 3 to 1 ratio of horizontal to vertical;
  - 2) The total capacity of any newly constructed lagoon shall be sufficient to store the waste generated by the facility for no less than 270 days;

- 3) Any lagoon exposed to precipitation shall have sufficient freeboard capacity to contain a 25 year, 24 hour storm, but in no case shall there be less than a 2 feet freeboard capacity; and
- 4) 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 and the subsurface drainage line.

Section 505.205 Liner Standards

- a) The owner or operator of any livestock waste lagoon required to have a liner constructed from in-situ soils, borrowed clay or a clay/bentonite mixture, or a synthetic liner pursuant to Section 505.204(c) 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  $1 \times 10^{-7}$  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) above;
  - 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 construction or 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 505.207 of this Part.

**Section 505.206 Groundwater Monitoring**

- a) The owner or operator of any livestock waste lagoon required to implement groundwater monitoring pursuant to Section 505.204(c) 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 located on the basis of local groundwater conditions with at least two wells downgradient of the 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 below the seasonal low water table depth;

- 3) Monitoring well 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) Monitoring wells shall be sampled once prior to placing the lagoon in service and quarterly thereafter. The samples shall be analyzed for nitrate-nitrogen, phosphate-phosphorous, chloride, organic carbon, sulfate, ammonia-nitrogen, Escherichia coli, and fecal coliform or fecal strep. Analytical results shall be submitted to the Department within 30 days of receipt and shall include a discussion relative to the significance of the results.

**Section 505.207 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 505.205 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 before placing the lagoon in service, the owner or operator shall certify to the Department on a form provided by the Department that the lagoon has been constructed or modified in accordance with the requirements of this Part and that the information provided during the registration process is correct. The certification notice to the Department shall include a certification statement as required under Section 15(b)(2) of the Livestock Management Facilities Act (510 ILCS 77/1 et seq.) and the signature of the owner or operator.
- 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 505.208 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 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 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 THIS PART. FAILURE TO CONSTRUCT THE LAGOON IN ACCORDANCE WITH THE REQUIREMENTS of this Part AND DEPARTMENT RECOMMENDATIONS IS A BUSINESS OFFENSE PUNISHABLE BY A FINE OF NOT MORE THAN \$5,000. (510 ILCS 77/15(f).)

### SUBPART C: WASTE MANAGEMENT PLAN

#### Section 505.301 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 agronomic crop nitrogen usage rates.

#### Section 505.302 Scope and Applicability

- a) The owner or operator of a livestock management facility with less than 1,000 animal units shall not be required to prepare and maintain a waste management plan.
- b) The owner or operator of a livestock management facility with 1,000 or greater but less than 7,000 animal units shall comply with the following:
  - 1) For facilities in existence as of the effective date of this Part, the owner or operator shall prepare and maintain a waste management plan within 60 working days after the effective date of this Part;
  - 2) For facilities which commence operations after the effective date of this Part, the owner or operator shall prepare and maintain a waste management plan within 60 working days of commencing operations;
  - 3) For facilities that reach or exceed 1,000 animal units through expansion, the owner or operator shall prepare and maintain a waste management plan within 60 working days after reaching or exceeding 1,000 animal units;



- 4) Prior to the end of the time period in subsections 505.302(b)(1) through (b)(3) above the owner or operator shall submit to the Department a form certifying that a livestock waste management plan has been prepared. The form shall also list the location of the plan; and
  - 5) The livestock waste management plan and records of waste disposal pursuant to Section 505.310 of this Part shall be kept on file at the facility for three years and shall be available for inspection by Department personnel during normal business hours.
- c) The owner or operator of a livestock management facility with 7,000 or greater animal units shall comply with the following:
- 1) For facilities in existence as of the effective date of this Part, the owner or operator shall submit to the Department a waste management plan within 60 working days after the effective date of this Part for approval by the Department;
  - 2) 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;
  - 3) For 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
  - 4) Records of livestock waste disposal pursuant to Section 505.310 of this Part shall be kept on file at the facility for three years and shall be available for inspection by Department personnel during normal business hours.
- d) For the purposes of this Subpart the number of animal units at a livestock management facility is the one-time maximum design capacity of that livestock management facility.
- e) A separate waste management plan shall be developed for each livestock waste handling facility and each separate type of livestock waste storage structure or system. Waste from different types of storage structures may be applied to the same land provided that the maximum nitrogen application rate to obtain optimum crop yields is not exceeded.
- f) Notwithstanding the above provisions, a livestock management facility subject to this Subpart may be operated on an interim basis but not to exceed six

months after the effective date of these rules to allow for the owner or operator of the facility to develop a waste management plan.

**Section 505.303 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, and number of animals 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 livestock waste to be disposed of annually;
- 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 to be applied to growing crops;
  - 2) Amount of nutrients available for application;

- 3) Nitrogen losses due to type of waste storage and method of application;
  - 4) Amount of plant-available nitrogen including mineralization of organic nitrogen;
  - 5) Amount of nutrients required by each crop in each field based on optimum crop yields;
  - 6) Nitrogen credits from previous crops 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 requirements of this provision;
  - 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;
  - 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;
  - r) A provision that livestock waste may not be applied in waterways, however livestock waste may be applied in grassed waterways with irrigation systems if the slope of the land is less than 5%, the distance to surface water is greater than 200 feet, the distance to potable water is greater than 150 feet, and precipitation is not expected within 24 hours; and
  - 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.

#### Section 505.304 Livestock Waste Volumes

Information for determining the amount of livestock waste available to be applied as required in Section 505.303(m)(1) of this Part shall be obtained as follows:

- a) For lagoons, or other structures containing diluted livestock waste, the facility owner or operator shall determine the volume for disposal through site specific measurements. An explanation of the method used to determine the volume for disposal shall be provided by the owner or operator and included in the plan.
- b) For storage tanks or other holding structures containing undiluted livestock waste, site specific measurements of volume are preferred. In lieu of actual measurements, values from Table 2-1, MWPS-18, Livestock Waste Facilities Handbook, p. 2.1 may be used.

#### Section 505.305 Nutrient Content of Livestock Waste

Values of nutrient content in livestock waste, as required in Section 505.303(m)(2) of this Part, may be obtained from Tables 2-1, 2-2, 10-6, or 10-7, MWPS-18, Livestock Waste Facilities Handbook, pp. 2.1, 2.2, 10.4, 10.5, or from the results of an analysis performed on samples of waste from the livestock facility. Laboratory analysis results shall be included in the waste management plan if the data is used for determining the nutrient content.

#### Section 505.306 Adjustments to Nitrogen Availability

- a) For Section 505.303(m)(3) of this Part, correction factors for nutrient loss from livestock waste due to type of handling and storage shall be obtained from Table 10-1, MWPS-18, Livestock Waste Facilities Handbook, p. 10.2, if nutrient content data is obtained from Tables 2-1 or 2-2, MWPS-18, Livestock Waste Facilities Handbook, pp. 2.1, 2.2.
- b) For Section 505.303(m)(3) of this Part, correction factors for nitrogen loss from livestock waste due to method of application to the land shall be obtained from Table 10-2, MWPS-18, Livestock Waste Facilities Handbook, p. 10.2.
- c) For Section 505.303(m)(4) of this Part, factors for calculating available nitrogen from organic nitrogen in livestock waste shall be obtained from Table 10-5, MWPS-18, Livestock Waste Facilities Handbook, p. 10.4.

#### Section 505.307 Optimum Crop Yields

The optimum crop yield goal, as required in Section 505.303(m)(5) of this Part, shall be determined for the land where the livestock waste is to be applied. The optimum crop yield can be determined using one of the following methods:

- a) Proven yields. Yield records shall be submitted for the past five years with a description of how the yield was proven. Data from years with crop disasters may be discarded. A minimum of three years data shall be submitted.
- b) Crop insurance yields. A copy of the determined yield shall be submitted.
- c) Farm Service Agency yields. A copy of the determined crop yield shall be submitted.
- d) Soils based yield data from the Natural Resources Conservation Service. A soil map of the application areas shall be submitted. The optimum crop yield shall be determined by a weighted average of the soil interpretation yield records for the areas that will receive livestock waste.

#### Section 505.308 Crop Nutrient Requirements

For Section 505.303(m)(5) of this Part, values for nutrients required for various crops in Illinois shall be obtained from Tables 11.12, 11.13 and 11.14, Circular 1333, Illinois Agronomy Handbook 1995-1996, pp. 82, 83 or from recommendations of the University of Illinois Cooperative Extension Service for crops not listed. For corn and grain, the nitrogen rate shall be 1.22 to 1.32 pounds per bushel of optimum yield. Nitrogen may be applied to soybeans at the same rate as if corn was being grown.

#### Section 505.309 Nitrogen Credits

- a) For Section 505.303(m)(6) of this Part, nitrogen credits from previous crops shall be obtained from Table 11.14, Circular 1333, Illinois Agronomy Handbook 1995-1996, p. 83. Nitrogen credits for previously applied livestock waste (manure) shall not be taken from Table 11.14, but shall be obtained according to Section 505.309(b) of this Part.
- b) Nitrogen credits shall be calculated 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.

#### Section 505.310 Records of Waste Disposal

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

- a) Date of livestock waste application;

- b) Field identification;
- c) Method of application;
- d) Livestock waste application rate;
- e) Number of acres receiving waste; and
- f) Amount of livestock waste applied.

**Section 505.311 Approval of Waste Management Plans**

- a) Department approval of livestock waste management plans shall be based on the following criteria:
  - 1) Livestock waste application rates of nitrogen based on crop usage for optimum yields;
  - 2) Demonstration of adequate land area for waste application based on Section 505.303 of this Part; and
  - 3) Completeness and accuracy of plan contents as specified in Section 505.303 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 505.312 Penalties**

- a) Any person who is required to prepare and maintain 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 and maintain 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 and maintain a waste management plan within 30 working days. For failure to prepare and maintain 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.

- b) Warning letters shall be sent via certified mail. The time period for a response by the livestock management facility owner or operator shall begin upon receipt of the warning letter.
- c) A waste management plan prepared pursuant to a warning letter or compliance agreement shall be subject to approval by the Department according to Section 505.311 of this Part.
- d) Penalties shall not be imposed for excessive nitrogen application for unplanned cropping changes due to the weather or other unforeseeable circumstances.

#### SUBPART D: CERTIFIED LIVESTOCK MANAGER

##### Section 505.401      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. 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 77/1 et seq.) and further described in this Part. 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 77/1 et seq.).
- b) For the purposes of this Subpart the number of animal units at a livestock management facility is the one-time maximum design capacity of that livestock management facility.

##### Section 505.402      Training Sessions

- a) A training session intended to assist livestock managers in meeting the requirements of certification shall be a minimum of three (3) hours duration and must address all general competency standards as established in Section 30 of the Livestock Management Facilities Act (510 ILCS 77/1 et seq.).
- b) Training sessions offered by organizations other than the Department shall first be approved by the Department to be a valid method of certification for livestock managers under Section 30(d) of the Livestock Management Facilities Act (510 ILCS 77/1 et seq.).
  - 1) Requests for training session approval shall be made in writing to the Department prior to their offering. Such requests shall include a specific course outline with contact time periods associated with each topic and copies of all handout materials to be utilized in the proposed training program.

- 2) The Department shall review the request and associated materials for compliance with the requirements included at Section 30(b) of the Livestock Management Facilities Act (510 ILCS 77/1 et seq.) and provide notification in writing to the organization whether the request is approved or denied.
- 3) An attendance list shall be maintained by the sponsoring organization at all approved training sessions. Upon completion of an approved session, the sponsoring organization shall forward a copy of the attendance sheet to the Department.

#### Section 505.403 Examinations

- a) The closed book examination will consist of 100 questions pertinent to general competency standards (see Section 30(b) of the Livestock Management Facilities Act (510 ILCS 77/1 et seq.)) for which a correct answer is to be selected for each question from multiple choice answers.
- b) A person may only make two attempts to successfully complete a written competency examination in any one normal work day. The examination can only be taken a maximum of three (3) times within any six month period.

#### Section 505.404 Methods of Certification

Livestock Manager certification will be granted or denied by the Department after compliance is established with Section 30(d)(1) or (2) of the Livestock Management Facilities Act (510 ILCS 77/1 et seq.) and upon receipt of the prescribed certification fee:

- a) If the method of compliance establishment includes a written examination, a minimum of 70% of the answers must be correct for certification to be granted;
- b) If the method of compliance establishment is attendance at a training session, the session must have been pre-approved by the Department and the applicant's name must appear on the attendance list; and
- c) In addition, all information requested on the examination application must be provided for certification to be granted.

#### Section 505.405 Training Materials and Training Fees

- a) Forms and training materials for livestock manager certification will be available at the local level at the Department's direction and at Department offices.

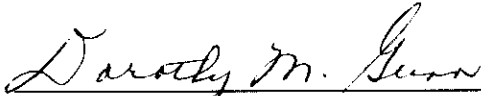


- b) The Department may charge fees for the supply of training materials and training sessions provided by the Department on a cost reimbursement basis. Such cost reimbursement may include meeting room rental, material purchase or duplication costs, other material-related expenses and staff expense associated with the conduct of the training session.

IT IS SO ORDERED.

Section 41 of the Environmental Protection Act (415 ILCS 5/41 (1994)) provides for appeal of final Board orders within 35 days of the date of service of this order. The Rules of the Supreme Court of Illinois establish filing requirements. (See also 35 Ill. Adm. Code 101.246 "Motions for Reconsideration.")

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion and order was adopted on the 29<sup>th</sup> day of October, 1996, by a vote of 6-0.

  
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Dorothy M. Gunn, Clerk  
Illinois Pollution Control Board