GUIDELINES AND PROCEDURES FOR THE IMPLEMENTATION OF POULTRY NUTRIENT MANAGEMENT PLANS IN GEORGIA

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INTRODUCTION

Commercial poultry production in Georgia annually contributes morethan $3.6 billion in farm gate value to the state's economy making poultry and eggs Georgia's primary agricultural industry. Of all the farm products produced in Georgia, poultry and eggs account for more than 50% of the farm value produced in the state. It has been estimated that one in every 16 employees in Georgia have jobs related to poultry with the total annual impact exceeding $12.0 billion. Given the size and the economic impact of this industry, it is important that poultry producers properly utilize dry and liquid manures as well as safely disposing of mortalities that occur in the course of production operations. The implementation of nutrient management plans by poultry producers can reduce the potential for adverse impacts on the environment, can take advantage of the value of poultry manures, and can have the added benefit of improving public perceptions of a poultry producers' commitment to best management practices.

Implementation of nutrient management plans on poultry farms is not difficult. The basic objectives of a nutrient management plan are the proper storage, handling and application of poultry manures to the land to minimize the potential for excess nutrients to get into surface or ground waters. The key components of a poultry nutrient management plan are soil and litter nutrient analysis, calculation of the appropriate amount of poultry manure for application, and documentation of the process.

The primary nutrients of concern in poultry manure application are nitrogen and phosphorous. Excessive application of these nutrients can result in contamination of ground and surface waters.

Nitrogen. Most of the nitrogen found in poultry manure or litter is in the form of organic nitrogen. A smaller amount of the nitrogen in the manure is ammonium. Organic nitrogen can be converted to inorganic nitrogen by bacteria in the soil. Inorganic nitrogen can be utilized by the plant. Excessive organic and ammonium forms of nitrogen can be transformed into nitrate nitrogen which in high levels in drinking water can be harmful to human health. Excess nitrogen can be removed from application sites by surface runoff and leaching and can end up in surface or ground water supplies.

Phosphorous. Poultry manure contains phosphorous. Phosphorous is essential for plant and animal nutrition, and poultry diets contain phosphorous for the chicken's growth needs. Certain forms of phosphorous that occur naturally in feeds used for poultry are poorly absorbed by the chicken's digestive tract and this unabsorbed phosphorous is eliminated in the manure. Research is underway to improve the availability of dietary phosphorous in the chicken's diet and therefore reduce the amount of phosphorous excreted in the manure.

Phosphorous laden soils can be eroded by rainfall and the particles can be transported to surface water sources. Excessive soluble phosphorous in surface water can result in excessive plant and algal growth. This condition can lead to fish kills by depleting the dissolved oxygen content of the water. Adoption of soil conservation practices that reduce soil erosion will reduce the potential for phosphorous deposition into surface waters.

Nitrogen and Phosphorous Based Plans. Many of Georgia's poultry producers will be able to implement nutrient management plans based on nitrogen applications, however, because of the serious potential for phosphorous pollution for some operators, phosphorous based nutrient management plans may be necessary. To ensure that phosphorous pollution does not occur from poultry farms in Georgia, the voluntary program as well as state mandated programs will incorporate the use of a phosphorous index in nutrient management plans. The phosphorous index has been developed to help poultry producers determine if their farms represent a high risk situation for this nutrient. When the phosphorous index indicates a high risk situation for a particular farm, a site specific nutrient management plan based on phosphorous will be developed.

State Regulations. For most poultry producers in Georgia, nutrient management plans are currently being implemented as part of a voluntary program developed cooperatively with the Georgia Poultry Federation and the University of Georgia. The exception to this case, however, exists for poultry producers with liquid manure handling systems. In 2001, Georgia's Environmental Protection Division (EPD) passed the "Animal (Non-Swine) Feeding Operation Permit Requirements" rule which requires nutrient management plans and operating permits for poultry operations having as few as 30,000 laying hens or broilers if the facility has continuous overflow watering or 9,000 laying hens or broilers if the facility has a liquid manure handling system. This rule also provided for certification and continuing educational requirements for Animal Feeding Operators. Upon the enactment of this rule, the Georgia Department of Agriculture implemented their "Animal Feeding Operator Training and Certification" rule which defines the requirements for certification and continuing education to comply with the EPD rule. Copies of these rules can be obtained from the Environmental Protection Division, the Georgia Department of Agriculture, the Georgia Poultry Federation or the University of Georgia.

Georgia's Voluntary Program. The Department of Poultry Science, University of Georgia, and the Georgia Poultry Federation have been working collaboratively in the development and implementation of nutrient management plans for all of Georgia's poultry producers regardless of whether a producer meets the state's definition of an Animal Feeding Operator or not. Implementation of nutrient management plans on all of Georgia's poultry farms is pro-active and demonstrates a continuing commitment of this industry to management practices that protect the environment while assuring continued growth and success of this very important agricultural business in Georgia. It is likely in the future that nutrient management plans and certification programs similar to the ones mandated for liquid poultry operators will be required for dry manure operators as well. That being the case, Georgia's voluntary nutrient management program will put poultry producers ahead of the game and should serve as the basis for compliance with state mandated programs.

Summary

The nutrients and organic material in poultry litter make an excellent soil conditioner and fertilizer. This is evidenced by the fact that years of application of this by-product to the soils have transformed north Georgia from a severely depleated landscape in the 1920's and 1930's to a productive and green one today. Poultry growers can continue to maximize the benefits of these important nutrients while minimizing adverse impacts on ground and surface waters through the proper storage, handling, and application of these materials. The implementation of nitrogen or phosphorous based nutrient management plans provides producers a means to manage their nutrients to meet plant needs, protect water quality, and obtain maximum economic benefit of the nutrients available in the litter or manure. The information provided here should assist poultry producers and nutrient management planners in the development of successful nutrient management plans for

Georgia poultry producers. Individuals seeking assistance with nutrient management plans should contact their local county Cooperative Extension Office.

STATE RULES

The Rules and Regulations for Water Quality Control, Chapter 391-3-6
February 28, 2001

391-3-6-.21 Animal (Non-Swine) Feeding Operation Permit Requirements

(1) Purpose.

The purpose of this paragraph 391-3-6-.21 is to provide for the uniform procedures and practices to be followed relating to the application for and the issuance or revocation of permits for animal (non-swine) feeding operations. Nothing in this paragraph shall be construed to preclude the modification of any requirement of this paragraph when the Division determines that the requirement is not protective of the environment.

(2) Definitions.

All terms used in this paragraph shall be interpreted in accordance with the definitions as set forth in the Act unless otherwise defined in this paragraph or in any other paragraph of these Rulest"

(a) "Act" means the Georgia Water Quality Control Act, as amended.

(b) "Animal feeding operation," "operation," or "AFO" means a lot or facility (other than an aquatic animal production facility or swine feeding operation) where animals have been, are, or will be stabled or confined and fed or maintained for a total of at least 45 days in any 12-month period, and the confinement areas do not sustain crops, vegetation, forage growth, or post-harvest residues in the normal growing season.

(c) "Animal Unit" (AU) is a unit of measurement for any AFO calculated by adding the following numbers: the number of slaughter and feeder cattle multiplied by 1.0, plus the number of mature dairy cattle multiplied by 1.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

(d) "Barn" means a structure where confinement feeding (feeding in limited quarters, often under a roof and over slotted floors) occurs. Structures where confinement feeding does not occur are not considered "barns" for the purposes of this rule.

(e) "Certified operator" means any person who has been trained and certified by the Georgia Department of Agriculture and has direct general charge of the day-to-day field operation of an AFO waste storage and disposal system , and who is responsible for the quality of the treated waste.

(f) "Closure plan" means the plan approved by the Division for clean up and closure of the AFO and associated waste storage and disposal facilities.

(g) "Comprehensive Nutrient Management Plan" (CNMP) is a plan which identifies actions or priorities that will be followed to meet clearly defined nutrient management goals at an agricultural operation. Defining nutrient management goals and identifying measures and schedules for attaining the goals are critical to reducing threats to water quality and public health. The CNMP should address, at a minimum, manure handling and storage, land application of manure and wastewater, site management, record keeping, and management of other utilization options. The CNMP must be developed or modified by a "certified specialist" defined by the Division. The Division will specify the requirements for certification. The CNMP is submitted to the Division for review and approval. It should include emergency response planning and a closure plan for abandonment of any facility used for the treatment or storage of animal waste.

(h) "Existing" applies to that which existed prior to the effective date of this rule. "Existing operation" means an AFO that was in operation prior to the effective date of this rule
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(i) "Natural Resources Conservation Service" (NRCS) is an agency within the United States Department of Agriculture.

(j) "New or expanding operation" or "new AFO" means an AFO the construction or expansion of which is commenced on or after the effective date of this rule.

(k) "NRCS guidance" means the latest editions of the Natural Resources Conservation Service (NRCS) Agricultural Waste Management Field Handbook, Part 651, FOTG Section IV Georgia, and other applicable publications of the NRCS. NRCS guidance is used by a certified specialist to develop or modify a CNMP.

(l) (Reserved)

(m) "Owner" means any person owning any system for waste treatment and disposal at an AFO.

(n) "Permit" means a permit applied for and issued in accordance with the terms and conditions for paragraphs 391-3-6-.06, Waste Treatment and Permit Requirements (individual NPDES permits), or 391-3-6-.11, Land Disposal and Permit Requirements (non-NPDES individual land application system or "LAS" permit), or 391-3-6-.15, Non-Storm Water General Permit Requirements (general NPDES permit), or 391-3-6-.19, General Permit - Land Application System Requirements (non-NPDES general LAS permit), of this Chapter.

(o) "Wetted area" or "disposal area" is the land area where AFO waste is sprayed, spread, incorporated, or injected so that the waste can either condition the soil or fertilize crops or vegetation grown in the soil.

(p) "25-year, 24-hour storm event" is the maximum 24-hour precipitation event expressed in inches with a probable recurrence interval of once in 25 years, as defined by the National Weather Service of the United States Department of Commerce in Technical Paper Number 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments.

(q) "100-year flood plain" is the land inundated from a flood whose peak magnitude would be experienced on an average of once every 100 years. The 100-year flood has a 1% probability of occurring in one given year.

(r) "300 AU" means three hundred animal units. Paragraph 391-3-6-.21 (2) (c) notwithstanding, the numbers of animals in any of the following categories are equivalent to 300 AU:

- 300 slaughter and feeder cattle,
- 200 mature dairy cattle (whether milked or dry cows),
- 150 horses,
- 3,000 sheep or lambs,
- 16,000 turkeys,
- 30,000 laying hens or broilers (if the facility has continuous overflow watering),
- 9,000 laying hens or broilers (if the facility has a liquid manure handling system),
- 1,500 ducks

(s) "1000 AU" means one thousand animal units. Paragraph 391-3-6-.21 (2) (c) notwithstanding, the numbers of animals in any of the following categories are equivalent to 1000 AU:

- 1,000 slaughter and feeder cattle,
- 700 mature dairy cattle (whether milked or dry cows),
- 500 horses,
- 10,000 sheep or lambs,
- 55,000 turkeys,
- 100,000 laying hens or broilers (if the facility has continuous overflow watering),
- 30,000 laying hens or broilers (if the facility has a liquid manure handling system),
- 5,000 ducks

(t) "3000 AU" means three thousand animal units. Paragraph 391-3-6-.21 (2) (c) notwithstanding, the numbers of animals in any of the following categories are equivalent to 3000 AU:

- 3,000 slaughter and feeder cattle,
- 2,100 mature dairy cattle (whether milked or dry cows),
- 1,500 horses,
- 30,000 sheep or lambs,
- 165,000 turkeys,
- 300,000 laying hens or broilers (if the facility has continuous overflow watering),
- 90,000 laying hens or broilers (if the facility has a liquid manure handling system),
- 15,000 ducks

(3) Permit Requirement.

(a) Any person who is the owner of an AFO with more than 300 AU shall obtain a permit from the Division in accordance with this paragraph corresponding to the age and size of the AFO.

(b) Any person who is the owner of an AFO with 300 AU or less is not required to obtain a permit unless the AFO is defined as a concentrated animal feeding operation per 40 CFR 122, Appendix B or the Division has made a case-by-case designation as a concentrated animal feeding operation, in which case NPDES permitting is required by 40 CFR 122.23. The owner of an AFO with 300 AU or less remains subject to applicable sections of the Act, including civil liability, civil penalty, and criminal penalty, ? O.C.G.A. 12-5-51, et seq.

(c) Two or more AFOs under common ownership are considered to be a single operation subject to this paragraph if they adjoin each other (are contiguous) or if they use a common area or system for the disposal of wastes.

(d) Exclusions from all permit requirements of this paragraph are made for the following facilities unless they are defined as a concentrated animal feeding operation per 40 CFR 122, Appendix B, or the Division has made a case-by-case designation as a concentrated animal feeding operation, or the Division has determined that they have potential to discharge, in which cases NPDES permitting is required by 40 CFR 122.23:

1. A livestock market, sale barn, stockyard, or auction house where animals are assembled from at least two sources to be publicly auctioned or privately sold on a commission basis and that is under state or federal supervision. However, these facilities are defined as AFOs if they meet the definition of an AFO in subparagraph (2)(b).

2. A poultry operation that properly stores and disposes of dry litter waste and does not have continuous overflow watering or a liquid manure handling system.

(4) Permit for Existing or New Operations with more than 300 but equal to or less than 1000 AU.

(a) Any person who is the owner of an existing AFO with more than 300 but equal to or less than 1000 AU must apply for an LAS permit from the Division by October 31, 2001. The Division may issue an individual or general permit. New or expanding AFOs must obtain an LAS permit from the Division prior to beginning the AFO with more than 300 but equal to or less than 1000 AU. Permit applications for new or expanding AFOs should be submitted 180 days prior to beginning the AFO with more than 300 but equal to or less than 1000 AU. Any person who owns or operates an existing or new AFO must have waste storage and disposal systems pursuant to this rule and meet the conditions in subparagraphs (b) through (i) below. Any person who is the owner of an AFO with more than 300 AU but equal to or less than 1000 AU is not required to obtain an NPDES permit unless the AFO is defined as a concentrated animal feeding operation per 40 CFR 122, Appendix B or the Division has made a case-by-case designation as a concentrated animal feeding operation, in which case NPDES permitting is required by 40 CFR 122.23.

(b) There shall be no discharge of pollutants from the operation into surface waters of the State unless a catastrophic rainfall event (25-year, 24-hour storm) occurs.

(c) Prior to beginning operation of the AFO, new operations must have waste storage and disposal systems in operation that have been designed and constructed in accordance with NRCS guidance.

(d) By October 31, 2002, the owner of an existing AFO shall submit to the Division a CNMP for the AFO. The CNMP shall be of sufficient substance and quality as to be approvable by the Division. The owner should receive the Division's approval of the CNMP by July 1, 2003, and shall begin implementing the approved CNMP not later than October 31, 2003. The owner of a new operation should submit to the Division a CNMP prior to beginning operation of the AFO.

(e) Existing operations should have a certified operator by October 31, 2002. New operations should have a certified operator prior to beginning the AFO. The certified operator should be trained and certified in

accordance with 391-3-6-.21(9).

(f) New operations must be designed and constructed to contain all process generated wastewaters plus the runoff from a 25-year, 24-hour storm event without an overflow from the waste storage lagoon.

(g) New waste storage lagoons located within significant ground water recharge areas which fall within the categories defined in the Georgia Department of Natural Resources Rules for Environmental Planning Criteria, Chapter 391-3-15-.02, Paragraph 3(e) must be provided with either a compacted clay or synthetic liner such that the vertical hydraulic conductivity does not exceed 5 x 10-7 cm/sec or other criteria as determined by the Division. If it is determined that an existing waste storage lagoon is creating a ground water contamination problem, the Division may require the lagoon to be repaired.

(h) New barns and new waste storage lagoons for new AFOs started after the effective date of this rule with more than 300 but equal to or less than 1000 AU, or for existing AFOs that are expanding production so that they will have more than 300 but equal to or less than 1000 AU after the effective date of this rule, shall not be located within a 100-year flood plain.

(i) Any failure to comply with any condition of (a) through (h) above shall be deemed a violation of the Act and may be punishable in accordance with the penalties provided for in the Act.

(5) Permit for Existing Operations with more than 1000 but equal to or less than 3000 AU.

(a) Any person who is the owner of an existing AFO with more than 1000 but equal to or less than 3000 AU must apply for an NPDES permit from the Division by October 31, 2001. The Division may issue an individual or general permit. Any person who expands an existing operation to include more than 1000 but equal to or less than 3000 AU becomes subject to the requirements of subparagraph (6), "Permit for New or Expanding Operations with more than 1000 but equal to or less than 3000 AU."

(b) There shall be no discharge of process wastewater pollutants per 40 CFR Part 412 from the feedlot(s) or manure storage areas to waters of the United States except when catastrophic rainfall events cause an overflow of process wastewater from a facility properly designed, constructed, maintained, and operated to contain all process generated wastewater resulting from the operation of the AFO plus all runoff from a 25 year, 24-hour rainfall event for the location of the AFO.

(c) By October 31, 2002, the owner shall submit to the Division a CNMP for the AFO. The CNMP shall be of sufficient substance and quality as to be approvable by the Division. The owner should receive the Division's approval of the CNMP by July 1, 2003, and shall begin implementing the approved CNMP not later than October 31, 2003.

(d) The operation should have a certified operator by October 31, 2002. The certified operator should be trained and certified in accordance with 391-3-6-.21(9).

(e) Public notice of the proposed draft permit will be prepared and circulated in accordance with 391-3-6-.06(7) or 391-3-6-.15(7).

(f) If it is determined that an existing waste storage lagoon is creating a ground water contamination problem, the Division shall require the owner to repair the lagoon, to close the lagoon, or to take other actions to

protect the ground water.

(g) The waste disposal system shall be designed and operated such that it does not cause Nitrate Nitrogen (NO3-N) in the ground water at the operation's property line to exceed 10 mg/l. The Division will require the owner to implement corrective actions if the permitted waste disposal system has caused the Nitrate Nitrogen (NO3-N) to exceed 10 mg/l as described.

(h) Representative samples shall be collected from each major soil series present within the waste disposal field areas in a manner to be specified in the permit. One down gradient ground water monitoring well shall be installed for each waste storage lagoon or series of lagoons. The number, location, design and construction specifications of the monitoring wells shall be submitted to the Division prior to issuance of a permit. Existing wells that are approved by the Division can be used for testing. Monitoring wells shall be properly installed within 24 months of permit issuance.

(i) The permit will contain specific requirements for monitoring the waste storage lagoon effluent to be land applied and for the ground water monitoring wells. This will usually consist, at a minimum, of semiannual monitoring of the effluent for Total Kjeldahl Nitrogen (TKN) and Nitrate Nitrogen (NO3-N) as well as semiannual monitoring of the wells for TKN and NO3- N.

(j) When the owner ceases operation of the AFO, he must notify the Division of that fact within three months, and he must properly close all waste storage lagoons within eighteen months. In the case of voluntary closure, a period of twenty-four months from notification is allowed. Proper closure of a lagoon entails removing all waste from the lagoon and land applying it at agronomic rates, and in a manner so as not to discharge to any surface water.

(k) Any failure to comply with any condition of (a) through (j) above or any condition of any individual permit issued for the
operation shall be deemed a violation of the Act and may be punishable in accordance with the penalties provided in the Act.

(6) Permit for New or Expanding Operations with more than 1000 but equal to or less than 3000 AU.

(a) Any person who proposes to commence operation of a new AFO with more than 1000 but equal to or less than 3000 AU after the effective date of this paragraph, or any person who proposes to expand an existing AFO to more than 1000 but equal to or less than 3000 AU after the effective date of this paragraph, must obtain an NPDES permit in accordance with this subparagraph. The Division may issue an individual or general permit. Permit applications should be submitted 180 days in advance.

(b) There shall be no discharge of process wastewater pollutants per 40 CFR Part 412 from the feedlot(s) or manure storage areas to waters of the United States except when catastrophic rainfall events cause an overflow of process wastewater from a facility properly designed, constructed, maintained, and operated to contain all process generated wastewater resulting from the operation of the AFO plus all runoff from a 25 year, 24-hour rainfall event for the location of the AFO. There shall be no discharge of pollutants into ground water which would cause ground water quality not to comply with the primary maximum contaminant levels established in Georgia's Rules for Safe Drinking Water, Chapter 391-3-5.

(c) Prior to beginning operation of the AFO, the operation must have waste storage and disposal systems in

operation that have been designed and constructed in accordance with NRCS guidance.

(d) Prior to beginning operation of the AFO, the owner shall submit to the Division a CNMP for the AFO. The CNMP shall be of sufficient substance and quality as to be approvable by the Division.

(e) The operation should have a certified operator for the waste storage and disposal system prior to beginning the AFO. The certified operator should be trained and certified in accordance with 391-3-6-.21(9).

(f) Public notice of the proposed draft permit will be prepared and circulated in accordance with 391-3-6-.06(7) or 391-3-.15(7).

(g) The waste storage and disposal system must be designed to contain all process generated wastewaters plus the runoff from a 25-year, 24-hour storm event without an overflow from the waste storage lagoon.

(h) Any waste storage lagoon must be constructed to ensure that seepage is limited to a maximum of 1/8 inch per day (3.67 x 10-6 cm/sec). For waste storage lagoons located within significant ground water recharge areas which fall within the categories defined in the Georgia Department of Natural Resources Rules for Environmental Planning Criteria, Chapter 391-3-15-.02, Paragraph 3(e), the lagoons must be provided with either a compacted clay or a synthetic liner such that the vertical hydraulic conductivity does not exceed 5 x 10-7 cm/sec or other criteria as determined by the Division. Individual waste storage lagoons shall not exceed 100 acre-feet in volume.

(i) It is required that a minimum of 2 feet of freeboard be maintained in the waste storage lagoons at all times.

(j) Barns and waste storage lagoons shall not be located within a 100-year flood plain.

(k) The following buffers shall be maintained:

1. 100 feet between wetted areas and water wells;

2. 100 feet between waste storage lagoons or barns or wetted areas and drainage ditches, surface water bodies, or wetlands;

3. 500 feet between waste storage lagoons or barns and any existing wells that supply water to a public water system, or any other existing well off the owner's property that supplies water for human consumption.

(l) Representative samples shall be collected from each major soil series present within the waste disposal field areas in a manner to be specified in the permit. One down gradient ground water monitoring well shall be installed for each waste storage lagoon or series of lagoons. The number, location, design and construction specifications of the monitoring wells shall be submitted to the Division prior to issuance of a permit. Existing wells that are approved by the Division can be used for testing. Monitoring wells shall be properly installed prior to the beginning of operation of the AFO.

(m) The permit will contain specific requirements for monitoring the waste storage lagoon effluent to be land

applied, and for the ground water monitoring wells. This will usually consist, at a minimum, of semiannual monitoring of the effluent for Total Kjeldahl Nitrogen (TKN) and Nitrate Nitrogen (NO3-N) as well as semiannual monitoring of the wells for TKN and NO3- N.

(n) When the owner ceases operation of the AFO, he must notify the Division of that fact within three months, and he must properly close all waste storage lagoons within eighteen months. In the case of voluntary closure, a period of twenty-four months from notification is allowed. Proper closure of a lagoon entails removing all waste from the lagoon and land applying it at agronomic rates, and in a manner so as not to discharge to any surface water.

(o) Any failure to comply with any condition of (a) through (n) above or any condition of any individual permit issued for the operation may be deemed a violation of the Act and may be punishable in accordance with the penalties provided in the Act.

(7) Permit for Existing Operations with more than 3000 AU.

(a) Any person who owns an existing AFO with more than 3000 AU must apply for an NPDES permit from the Division by October 31, 2001. The Division may issue an individual or general permit. Any person who expands an existing operation to more than 3000 AU becomes subject to the requirements of subparagraph (8), "Permit for New or Expanding Operations with more than 3000 AU."

(b) There shall be no discharge of process wastewater pollutants per 40 CFR Part 412 from the feedlot(s) or manure storage areas to waters of the United States except when catastrophic rainfall events cause an overflow of process wastewater from a facility properly designed, constructed, maintained, and operated to contain all process generated wastewater resulting from the operation of the AFO plus all runoff from a 25 year, 24-hour rainfall event for the location of the AFO.

(c) By October 31, 2002, the owner shall submit to the Division a CNMP for the AFO. The CNMP shall be of sufficient substance and quality as to be approvable by the Division. The owner should receive the Division's approval of the CNMP by July 1, 2003, and shall begin implementing the approved CNMP not later than October 31, 2003.

(d) The operation should have a certified operator by October 31, 2002. The certified operator should be trained and certified in accordance with 391-3-6-.21(9).

(e) Public notice of applications and proposed draft permits will be prepared and circulated in accordance with 391-3-6-.06(7) or 391-3-6-.15(7). Furthermore, a proposed determination to issue an individual permit requires that the applicant shall post the public notice on a three feet by five feet sign at the entrance of the applicant's premises and publish the public notice in one or more newspapers of general circulation in the area affected by the AFO.

(f) If it is determined that an existing waste storage lagoon is creating a ground water contamination problem, the Division shall require the owner to repair the lagoon, to close the lagoon, or to take other actions to protect the ground water.

(g) The waste disposal system shall be designed and operated such that it does not cause Nitrate Nitrogen (NO3-N) in the ground water at the operation's property line to exceed 10 mg/l. The Division will require

the owner to implement corrective actions if the permitted waste disposal system has caused the Nitrate Nitrogen (NO3-N) to exceed 10 mg/l as described.

(h) Representative samples shall be collected from each major soil series present within the waste disposal field areas in a manner to be specified in the permit. One down gradient ground water monitoring well shall be installed for each waste storage lagoon or series of lagoons. The number, location, design and construction specifications of the monitoring wells shall be submitted to the Division prior to issuance of a permit. Existing wells that are approved by the Division can be used for testing. Monitoring wells shall be properly installed within 24 months of permit issuance.

(i) The permit will contain specific requirements for monitoring the waste storage lagoon effluent to be land applied, and for the ground water monitoring wells. This will usually consist, at a minimum, of semiannual monitoring of the effluent for Total Kjeldahl Nitrogen (TKN) and Nitrate Nitrogen (NO3-N) as well as semiannual monitoring of the wells for TKN and NO3- N.

(j) When the owner ceases operation of the AFO, he must notify the Division of that fact within three months, and he must properly close all waste storage lagoons within eighteen months. In the case of voluntary closure, a period of twenty-four months from notification is allowed. Proper closure of a lagoon entails removing all waste from the lagoon and land applying it at agronomic rates, and in a manner so as not to discharge to any surface water.

(k) Any failure to comply with any condition of (a) through (j) above or any condition of any individual permit issued for the operation shall be deemed a violation of the Act and may be punishable in accordance with the penalties provided in the Act.

(8) Permit for New or Expanding Operations with more than 3000 AU.

(a) Any person who proposes to be the owner or operator of a new AFO with more than 3000 AU, and any person who is the owner or operator of an existing operation that is expanding production so that it will have more than 3000 AU, which proposes to commence operation after the effective date of this rule must obtain an individual NPDES permit in accordance with this paragraph prior to commencing construction for the operation.

1. Permit applications should be submitted 180 days in advance.

2. (Reserved)

3. The owner of an existing operation that is expanding production so that it will have more than 3000 AU after the effective date of this rule must obtain an individual NPDES permit.

(b) There shall be no discharge of process wastewater pollutants per 40 CFR Part 412 from the feedlot(s) or manure storage areas to waters of the United States except when catastrophic rainfall events cause an overflow of process wastewater from a facility properly designed, constructed, maintained, and operated to contain all process generated wastewater resulting from the operation of the AFO plus all runoff from a 25 year, 24-hour rainfall event for the location of the AFO. There shall be no discharge of pollutants into ground water which would cause ground water quality not to comply with the primary maximum contaminant levels established in Georgia's Rules for Safe Drinking Water, Chapter 391-3-5.

(c) Prior to beginning operation of the AFO, the operation must have waste storage and disposal systems in operation that have been designed and constructed in accordance with NRCS guidance.

(d) Prior to beginning operation of the AFO, the owner and operator if co-permitted, shall submit to the Division a CNMP for the AFO. The CNMP shall be of sufficient substance and quality as to be approvable by the Division.

(e) The operation should have a certified operator for the waste storage and disposal system prior to beginning the AFO. The certified operator should be trained and certified in accordance with 391-3-6-.21(9).

(f) Public notice of the completed application and proposed draft permit will be prepared and circulated in accordance with 391-3-6-.06(7). Furthermore, a proposed determination to issue an individual permit requires that the applicant shall post the public notice on a three feet by five feet sign at the entrance of the applicant's premises and publish the public notice in one or more newspapers of general circulation in the area affected by the AFO.

(g) The waste storage and disposal system must be designed to contain all process generated wastewaters plus the runoff from a 25-year, 24-hour storm event without an overflow from the waste storage lagoon.

(h) Any waste storage lagoon must be constructed to ensure that seepage is limited to a maximum of 1/8 inch per day (3.67 x 10-6 cm/sec). For waste storage lagoons located within significant ground water recharge areas which fall within the categories defined in the Georgia Department of Natural Resources Rules for Environmental Planning Criteria, Chapter 391-3-15-.02, Paragraph 3(e), the lagoons must be provided with either a compacted clay or a synthetic liner such that the vertical hydraulic conductivity does not exceed 5 x 10-7 cm/sec or other criteria as determined by the Division. Individual waste storage lagoons shall not exceed 100 acre-feet in volume.

(i) It is required that a minimum of 2 feet of freeboard be maintained in the waste storage lagoons at all times.

(j) Barns and waste storage lagoons shall not be located within a 100-year flood plain.

(k) The following buffers shall be maintained:

1. 100 feet between wetted areas and water wells;

2. 100 feet between waste storage lagoons or barns or wetted areas and drainage ditches, surface water bodies, or wetlands;

3. 500 feet between waste storage lagoons or barns and any existing wells that supply water to a public water system, or any other existing well off the owner's property that supplies water for human consumption.

(l) Representative samples shall be collected from each major soil series present within the waste disposal field areas in a manner to be specified in the permit. One down gradient ground water monitoring well shall

be installed for each waste storage lagoon or series of lagoons. The number, location, design and construction specifications of the monitoring wells shall be submitted to the Division prior to issuance of a permit. Existing wells that are approved by the Division can be used for testing. Monitoring wells shall be properly installed prior to the beginning of operation of the AFO.

(m) The permit will contain specific requirements for monitoring the waste storage lagoon effluent to be land applied, and for the ground water monitoring wells. This will usually consist, at a minimum, of semiannual monitoring of the effluent for Total Kjeldahl Nitrogen (TKN) and Nitrate Nitrogen (NO3-N) as well as semiannual monitoring of the wells for TKN and NO3- N.

(n) When the owner or operator ceases operation of the AFO, he must notify the Division of that fact within three months, and he must properly close all waste storage lagoons within eighteen months. In the case of voluntary closure, a period of twenty-four months from notification is allowed. Proper closure of a lagoon entails removing all waste from the lagoon and land applying it at agronomic rates, and in a manner so as not to discharge to any surface water.

(o) Any failure to comply with any condition of (a) through (n) above or any condition of any individual permit issued for the operation may be deemed a violation of the Act and may be punishable in accordance with the penalties provided in the Act.

(9) Certified Operator - Training and Certification Requirements.

(a) AFOs should have certified operators according to the following schedule:

1. Existing operations with 301 to 1000 AU, 1001 to 3000 AU, and more than 3000 AU: October 31, 2002.

2. New or expanding AFOs with 301 to 1000 AU, 1001 to 3000 AU, and more than 3000 AU: Prior to beginning the AFO.

(b) AFO certified operators should be trained and certified by the Georgia Department of Agriculture. Proof of such training, certification and continuing education may be maintained by the Department of Agriculture and records provided to the Georgia Environmental Protection Division.

(c) Certification training, agenda and topics will be determined by the Georgia Department of Agriculture; but will include, at a minimum, best management practices, comprehensive nutrient management planning, understanding regulations and water quality laws, standards and practices, siting, pollution prevention, monitoring and record keeping. Training programs will be structured to address the needs of the certified operators of differing sizes and various waste management technologies. Continuing education will be required to maintain this certification.

Authority: O.C.G.A. Section 12-5-20, et. seq.