Committed to Building a Stronger Industry in the Southeast

Georgia’s Dairy Industry
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Why Choose Georgia?

Milk production is a capital investment enterprise which depends on a unique set of favorable conditions for success. Among these are affordable farmland, a ready supply of high quality feed and forage, easy access to milk processing facilities, “agriculture friendly” environmental regulations, and milk prices that afford dairymen the opportunity to earn a fair rate of return on their investment.

Georgia possesses a combination of these characteristics that has enabled it to remain one of the major milk producing states in the deep south. With a demand for milk which will only increase along with its growing population, three major milk producing facilities, and among the highest federally regulated milk prices in the country, Georgia’s dairy industry is positioned for growth. Mild temperatures, long growing seasons, and the research extension support of the University of Georgia’s College of Agricultural and Environmental Sciences combine to make Georgia the new opportunity for dairy farm families.

**cooperative presence**

Several major dairy cooperatives have a strong presence in Georgia. These offer field support and the opportunity to effectively market their milk to one of the many processing cities located in the region.

**affordable farmland**

Most of Georgia’s agricultural production takes place in the south-central part of the state, also known as the coastal plain. According to the United States Department of Agriculture’s Economic Research Service, the average value per acre of farm real estate in Georgia was $3,600 in 2013, substantially less than that of a number of other major milk producing states for which it cites milk production costs.

**higher milk prices**

Milk pricing throughout much of the United States is regulated by Federal Milk Marketing Orders. The FMMO is an integrated system designed to set minimum prices for milk based on prevailing supply and demand conditions. The system also provides financial incentives for supplying milk to deficit areas.

Georgia is included in the Southeast Federal Milk Marketing Order, which represents one of the most milk deficit areas of the U.S. Consequently, producers in Georgia receive some of the highest milk prices in the country. A comparison of selected “mailbox” milk prices compiled by HOARD’s Dairyman shows that dairymen in the southeast, including Georgia, received an average price of $26.44 in March 2014. The highest, at $27.27, was Florida, which receives about half of all milk produced in Georgia and returns that higher price to Georgia producers.

**university support**

The University of Georgia’s College of Agricultural and Environmental Sciences offers support to the state’s dairy industry through research and extension. The College’s Dairy Research Center is located in Tifton, Georgia, in the heart of the state’s coastal plain. The Center’s staff support the industry through research in a number of areas including feed and forage production, cow health and comfort, environmental quality and nutrition management. The University’s Center for Agribusiness and Economic Development draws from the resources of many individual departments such as Agricultural Economics, Food Science, and Agricultural Engineering, to provide financial feasibility studies, business plans, and other marketing services.
Georgia’s Dairy Industry

Georgia Dairy Facts:

- In 2012, Georgia’s dairy industry ranked 9th among the state’s top ten agricultural commodities.
- In January 2014, Georgia was home to over 84,000 dairy cows.
- The average dairy herd size in Georgia is 349 cows.
- Average milk production per cow in Georgia is 2,224 gallons per year.
- In 2013, 55% of raw milk produced in Georgia was exported out of state, 45% of that milk was exported to Florida.
- There are 11 Grade A processing plants, 42 manufacturing plants and 17 single service plants in the state.
- Each Georgia dairy cow has an economic impact of $13,315.
- Georgia’s dairy industry contributes $1.1 billion to the economy each year.

Climate:

- A humid subtropical climate with mild winters and hot, moist summers is characteristic of most of Georgia. This, combined with a variety of soil types from the coast to the mountains, makes it an ideal place to produce a diverse variety of crops and livestock.
- Monthly average temperatures range from a high of 92.2°F to a low of 32.6°F.
- The average annual rainfall varies from 40” in central Georgia to more than 75” in northeast Georgia.

General State Facts:

- Georgia is the largest state east of the Mississippi with a land area of 57,919 square miles.
- Georgia has 4.5 million acres of cropland.
- One out of seven Georgians works in agriculture, forestry or a related sector.
- Agriculture contributes more than $76 billion, or to Georgia’s $809.9 billion economic output annually.
- Livestock production contributes $5.5 billion to farm gate recipients in Georgia.

Soil:

- Geographically, Georgia can be divided into eight soil provinces or major land resource areas (MLRA). They are Southern Appalachian, Sand Mountain, Blue Ridge, Southern Coastal Plain, Black Lands, Southern Piedmont, Sand Hill, and Atlantic Coast Flatwoods.
- Georgia is the leading kaolin clay-producing state in the U.S.

**Information gathered from NASS, GA Department of Agriculture and University of Georgia publications.**
For questions regarding this packet and the Georgia Dairy Industry contact:
Georgia Milk Producers, Inc.
1641 New High Shoals Road
Suite 5
Watkinsville, GA 30677
(706) 310-0020 Office
(706) 310-0025 Fax
www.gamilk.org

For questions regarding Grade A Dairy Permitting contact:
Food Safety Division
Capitol Square, Room 316
Atlanta, GA 30334-4201
(404) 656-3625
www.agr.georgia.gov/dairy.aspx

For questions regarding NPDES Permitting and CNMPs contact:
Daniel Duncan
Georgia Dept. of Agriculture
19 MLK, Jr. Drive, Room 112
Atlanta, GA 30334-4201
(404) 656-3665
daniel.duncan@agr.georgia.gov

University Support:
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(478) 472-8734  
marvinpyoder@gmail.com
Georgia Realtor Information

Don Ellers
Licensed Broker, Alabama / Georgia
www.landcrawler.com
(770) 424-5800 Office
(770) 365-7749 Mobile
(770) 424-2551 Fax

Cathy Hawkins
Hawkins & Whitaker Real Estate, LLC
(706) 551-1299 Cell
(706) 554-6097 Office
cathy@hawkinswhitakerrealestate.com
www.hawkinswhitakerrealestate.com

Southern Forestry Realty
305 W. Shotwell Street
Bainbridge, GA 39819
(229) 246-5785 Office
(229) 246-5794 Fax
bud@southernforestryrealty.com
www.southernforestryrealty.com

Farm & Plantation Realty, LLC
Farms-Timber-Timberland-Plantations
4600 Leary Road
Albany, Georgia 31707
(229) 446-0600 Office
(229) 438-7776 Fax
www.farmplantationrealty.com

Southern Land Exchange
1551 Jennings Mill Road
#1400a
Bogart, GA 30622
(706) 549-5050 Office
(706) 549-8909 Fax
www.southernlandexchange.com

Albany Land Co., Inc.
2402 Dawson Road
Albany, GA 31707
(229) 888-0022 Office
(229) 436-6158 Fax
questions@albanyland.com
www.albanyland.com

Hub City Realty
544 Broad Street
Hawkinsville, GA 31036
(478) 783-0544 Office
(888) 812-7448 Toll Free
(478) 783-2044 Fax
info@hubcityrealty.com

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Mark Crews, ALC
Lic. Real Estate Broker in GA, FL & AL
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National Realty Co.
807 16th Avenue East
Cordele, GA 31015
(229) 273-4132 Office
(229) 273-9199 Fax
www.nationalrealty-cordele.com

Land and Farm
www.landandfarm.com
New to Georgia?

Enclosed is a handy packet for what you need to know about getting started in the Georgia Dairy Industry
NEW PRODUCER PACKET

Compiled in this packet is information which will assist the starting dairyman in meeting some of the requirements of the Grade A Pasteurized Milk Ordinance. In order to assure a standard of compliance to federal and state regulations, routine inspections and samplings must be performed.

If, in fact, a dairyman's standards are consistent with or exceed the regulations, routine inspections will help to identify problems which will essentially help the dairyman to produce a higher quality product and meet all Grade A requirements. Well trained employees and good practices and technique should produce good inspection results and also result in a very good relationship between our sanitarian and the producer. The receptive dairy farmer will soon learn that our sanitarians may be able to offer practical solutions to sometimes seemingly difficult problems:

Hopefully, the information contained herein will answer questions, however, as other arise, the professional sanitarian in your area will certainly be ready to assist in all matters within his/her lines of responsibility. If you do not know the name of the sanitarian assigned to your area, you may call our office at 404-656-3625 and we will determine who your sanitarian will be and contact them to let them know your name and phone number where you may be reached.

Again, our number in the Dairy Office is 404-656-3625. We will be glad to assist you in every way possible. Please do not hesitate to call us if we may be of assistance. Listed below is the web site for the PMO and Rules and Regulations for the Georgia Department of Agriculture.

PASTEURIZED MILK ORDINANCE

AGRICULTURE RULES AND REGULATIONS (40-2-1 THRU 40-2-15):
http://rules.sos.state.ga.us/cgi-bin/page.cgi?q=GEORGIA_DEPARTMENT_OF_AGRICULTURE%2FMILK_AND_MILK PRODUCTS%2Findex.html&d=1
NEW CONSTRUCTION AND REMODELING REQUIREMENTS FOR DAIRY BARNS

Plans and site of all new dairy barns, and plans for remodeling must be approved by the Georgia Department of Agriculture, Dairy Division.

All construction will be concrete block or better.

PARLOR

- All floors will be concrete or better and properly sloped to drain, including restrooms.
- All walls and ceiling will be painted, tiled or covered with approved material.
- Adequate natural or artificial light will be provided.
- Adequate ventilation will be provided with windows or forced air, all fans will have self closing louvers.
- Minimum 8 foot ceiling required.
- All clean in place lines and fittings will be of equal quality of milk lines and self draining.

MILK ROOM

- All floors will be concrete or better and properly sloped to drain.
- All walls and ceilings will be painted, tiled or covered with approved material.
- Adequate natural or artificial light will be provided. Light fixtures will not be installed over milk tank openings.
- Adequate ventilation will be provided with windows or forced air may be used to dissipate excess moisture and/or steam, self closing louvers must be used with fans.
- A lavatory with hot and cold water will be conveniently provided.
- All openings must have solid closeable doors and windows, doors to open to outside unless screen doors are used, all windows screened.
- Eight foot ceiling required with 36” space between the milk tank and ceiling.
- Rooms should be adequate size to allow 30 inches clearance between tank and walls and between tanks.
- All clean in place lines and equipment will be of equal quality of milk lines and be self-draining. No PVC material will be used on-milk-contact or wash-up-equipment.

TOILET

- One or more flush toilets will be provided, with no opening into milk room.
- Must be vented to outside with screened vent or window and have a self closing door (fly tight).
- Must be connected to a septic tank system approved by local health sanitarian.

WATER SUPPLY

- Well should be sealed and water system shall meet all PMO and State of Georgia requirements.
- No Grade A milk will be shipped until a satisfactory water sample has been tested and recorded.
- Two foot radius concrete sloped away from well casing.
HOLDING AREA

- A concrete holding area of adequate size will be provided (15 sq. feet per cow), sloped to drain properly.
- An eight inch curb will be required around the holding area including all entrance and exit lanes. Curb should be concrete or equally impervious material.

BULK MILK TANKS

All bulk milk tanks manufactured after January 1, 2000 must have a recording thermometer.

MILK TANK CALIBRATION

You may contact the Georgia Department of Agriculture, Weights and Measures Division at (404) 656-3605 to get your Milk Tank calibrated. All farm tanks in Georgia, must by law, be calibrated, in order to meet specifications as a legal storage container in which to qualify for sale of milk by farmer.

WASTE DISPOSAL SYSTEM APPROVAL

- Written approval from the local County Health Department is required of all septic tanks before a permit may be issue.
- Dairies with 200-700 mature dairy cattle (milking & dry) must have a Land Application System (LAS) Permit approval.
- Dairies with more than 700 mature dairy cattle (milking & dry) must have National Pollutant Discharge Elimination (NPDES) permit.
- For (LAS) & (NPDES) PERMITS CONTACT GEORGIA DEPARTMENT OF AGRICULTURE — LIVESTOCK/POULTRY FIELD FORCES AT 404-656-3665.

EQUIPMENT AND INSTALLATION

- Equipment and installation must meet 3-A Accepted Practices and be approved by Agriculture sanitary before a Grade A permit will be issued.
STANDARDS FOR WELL AND BOREHOLES (Georgia Code 12-5-134)

The following standards shall apply to all wells and boreholes:

(1) In the case of individual and nonpublic water wells:

(A) (i) The well should be located as far removed, and in a direction opposite to the ground water flow, from unknown or potential sources of pollutants as the general layout of the premises and surroundings permit; however, prior to actual construction, the water well contractor shall notify the county health department of the intent to drill a water well, provided such information as is required on forms prepared by the council. The well shall not be located in areas subject to flooding unless the well casing extends at least two feet above the level of the highest known flood of record. Except as otherwise provided in division (ii) of this subparagraph, all new wells must be located at least the following horizontal distances from the following structures:

(i) Not less than 10 feet from a sewer line;

(ii) Not less than 50 feet from a septic tank;

(iii) Not less than 100 feet from a septic tank absorption field;

(iv) Not less than 150 feet from a cesspool or seepage pit;

(v) Not less than 100 feet from an animal or fowl enclosure;

(A)(ii) Any property owner may apply to the health department for a variance of the distances cited in this subparagraph due to extenuating circumstances. The owner shall provide for the health department written information explaining the need for a variance. The health department, upon considering the information provided and any other information it deems necessary, may issue a variance.
LISTED BELOW ARE THE NAME AND PHONE NUMBERS OF SOME DAIRY EQUIPMENT
SUPPLIERS IN THE STATE.

- **MILKING EQUIPMENT**
  - Custom Dairy Supply Madison, Ga 706-554-9864
  - Dairy South Co. (Hugh Boyce) Waynesboro, Ga 706-554-9864
  - Altman Equipment Co. O’Brien, FL 386-963-2842
    - Tim 386-362-9145 (cell)
    - Scott 386-590-4081 (cell)
    - 386-963-1416 (fax)
  - Shamrock Vet & Dairy Service Eatonton, Ga 706-484-2601
  - Chapman Dairy Equipment Hartsville, SC 843-332-3289
  - C.R. Lusk Farm Supply Honea Path, SC 864-369-0714 (home)
    - 864-369-0347 (store)
    - 864-314-5232 (mobile)
    - 864-369-1625 (fax)
  - GEA WestfaliaSurge Jacksonville, FL 800-359-0030
  - Jake Martin (Consultant) Gainesville, FL 352-371-4655
    - Lagoon & CNMP’s

**RAW MILK HANDLERS**

<table>
<thead>
<tr>
<th>DFA</th>
<th>Premier Milk Inc. (PMI)</th>
</tr>
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<tbody>
<tr>
<td>Mark Coiner</td>
<td>Thomas Pittman</td>
</tr>
<tr>
<td>C: 706-476-0613</td>
<td>C: 352-875-8194</td>
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<thead>
<tr>
<th>Maryland Virginia</th>
<th>Lonestar Milk (LS)</th>
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<tr>
<td>703-742-7442</td>
<td>David Dozier</td>
</tr>
<tr>
<td>Kevan McDonald</td>
<td>C: 706-564-2471</td>
</tr>
<tr>
<td>C: 706-340-5161</td>
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</tbody>
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<thead>
<tr>
<th>SMI</th>
<th>Lanco Pennland (LP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-800-598-7866</td>
<td>301-393-5554</td>
</tr>
<tr>
<td>Drew Denman</td>
<td></td>
</tr>
<tr>
<td>C: 352-598-5168</td>
<td></td>
</tr>
</tbody>
</table>
Environmental Regulations

Need to know the rules?
Enclosed is a listing of the environmental regulations and various permits required for Georgia dairy farms
391-3-6-.21 Animal Feeding Operation Permit Requirements.* Amended.

(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 feeding operations with more than 300 Animal Units (AU). This paragraph only includes swine feeding operations with more than 300 AU but equal to or less than 3000 AU. The requirements for swine feeding operations with more than 3000 AU are at paragraph 391-3-6-.20. 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 Rules:

(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 with more than 3000 AU) 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 swine weighing over 25 kilograms (approximately 55 pounds) multiplied by 0.4, 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 under a roof) 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) “Concentrated Animal Feeding Operation,” or “CAFO,” means an AFO which is defined as a Large CAFO or Medium CAFO by 40 CFR 122.23 (4) and (6), or that is designated as a CAFO.

(h) "Existing" applies to that which existed prior to September 15, 2003. "Existing operation" means an AFO that was in operation prior to September 15, 2003.

(i) "Freeboard" is the extra depth added to a waste storage lagoon or structure as a safety factor between the designed full depth and the overflow depth. This is the vertical distance below the lowest point of the lagoon or structure berm above which the liquid level must never rise except in the case of a storm event exceeding the design maximum precipitation event.

(j) "Natural Resources Conservation Service" (NRCS) is an agency within the United States Department of Agriculture.
"New" applies to that which existed on or after September 15, 2003. "New or expanding operation" or "new AFO" means an AFO the construction or expansion of which is commenced on or after September 15, 2003.

"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. A certified specialist or trained person may use NRCS guidance to develop or modify an NMP.

"Nutrient Management Plan" (NMP) 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 NMP should address activities related to compliance with effluent limitations and other permit requirements, including manure handling and storage, land application of manure and wastewater, site management, record keeping, and management of other utilization options. For an AFO with a liquid manure handling system, the NMP must be developed or modified by a "certified specialist" as defined by the Division. The Division will specify the requirements for certification. For an AFO that handles dry manure, the NMP must be developed by a person trained in the subject by an academic or trade organization. It should include emergency response planning and a closure plan for abandonment of any facility used for the treatment or storage of animal waste. The requirements for submittal and approval of the NMP are specified in the following paragraphs.

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

"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.

"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.

"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.

"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.

"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:

1. 200 mature dairy cows, whether milked or dry,
2. 300 veal calves,
3. 750 swine each weighing 55 pounds or more.
4. 300 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls, and cow/calf pairs,
5. 150 horses,
6. 3,000 sheep or lambs,
7. 16,500 turkeys,
8. 9,000 laying hens or broilers, if the AFO uses a liquid manure handling system,
9. 1,500 ducks, if the AFO uses a liquid manure handling system.
"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. 700 mature dairy cows, whether milked or dry,
2. 1,000 veal calves,
3. 2,500 swine each weighing 55 pounds or more,
4. 10,000 swine each weighing less than 55 pounds (immature swine or nursery pigs),
5. 1,000 cattle other than mature dairy cows or veal calves. Cattle includes but is not limited to heifers, steers, bulls, and cow/calf pairs,
6. 500 horses,
7. 10,000 sheep or lambs,
8. 55,000 turkeys,
9. 30,000 laying hens or broilers, if the AFO uses a liquid manure handling system,
10. 125,000 chickens or broilers (other than laying hens), if the AFO handles dry manure only,
11. 82,000 laying hens, if the AFO handles dry manure only,
12. 30,000 ducks, if the AFO handles dry manure only,
13. 5,000 ducks, if the AFO uses a liquid manure handling system.

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

1. 7,500 swine each weighing 55 pounds or more,
2. 30,000 swine each weighing less than 55 pounds (immature swine or nursery pigs).

3 Basic 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 is not required to obtain an NPDES permit unless the AFO is defined as a CAFO per 40 CFR 122 and discharges to a water of the State excluding subsurface water (groundwater), or the Division has made a case-by-case designation as a CAFO and NPDES permitting is required for discharges to a water of the State excluding subsurface water (groundwater) by 40 CFR 122.23. The owner of any 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) Discharges from a CAFO include discharges of manure, litter, or process wastewater from land application areas under the control of the CAFO that are not exempt as agricultural storm water discharges. Precipitation-related discharges qualifying as agricultural storm water discharges are not subject to these permit requirements. For discharges from the land application area to qualify as agricultural storm water, manure and wastewater must be applied in accordance with site-specific practices that ensure appropriate agricultural utilization of nutrients [under 40 CFR 122.23(e)].

(d) The Division will notify the public of a proposal to grant coverage under a general NPDES permit or a proposed individual NPDES permit and make available for public review and comment the permit application, the notice of intent, the NMP, and the draft terms of the NMP to be incorporated into the permit.

(e) 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.

(f) Exclusions from all permit requirements of this paragraph are made for the following facilities unless they are defined as a CAFO per 40 CFR 122 or the Division has made a case-by-case designation as a CAFO and they 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 391-3-6-.21(2)(b).

(g) Any person who removes and transports animal waste from its point of origin shall conform to the animal manure handler rules of the Georgia Department of Agriculture.

(4) Permit for Operations with Liquid Manure Handling Systems.

(a) Any person who is the owner of an AFO with more than 300 AU and uses liquid manure handling must apply for an LAS permit from the Division. The Division may issue an individual or general permit. Permit applications for new or expanding AFOs should be submitted 180 days prior to beginning the AFO. Any person who owns an AFO must have waste storage and disposal systems pursuant to this rule and meet the conditions in subparagraphs (b) through (o) below.

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

(c) The owner of an existing AFO shall submit to the Division an NMP for the AFO. The NMP shall be of sufficient substance and quality as to be approvable by the Division. The owner of a new operation shall submit to the Division an NMP and obtain approval prior to beginning operation of the AFO.

(d) All operations shall have a certified operator. New operations shall have a certified operator prior to beginning operation of the AFO. The certified operator shall be trained and certified in accordance with 391-3-6-.21(5).

(e) Any new waste storage lagoon or structure 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). However, new waste storage lagoons or structures 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 391-3-16.02(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 or structure is creating a ground water contamination problem, the Division may require the lagoon or structure to be repaired.

(f) New barns and new waste storage lagoons or structures for all new AFOs shall not be located within a 100-year flood plain.

(g) For new operations with more than 1000 AU, it is required that a minimum of 1 foot of freeboard plus storage for the 25 year 24 hour storm event be maintained in the waste storage lagoons or structures. The liquid level must not rise into this design storage level for lesser storms.

(h) For new operations with more than 1000 AU, the following buffers and setbacks shall be maintained:

1. 100 feet between wetted areas and water wells that supply water for human consumption;
2. 100 feet between waste storage lagoons, waste storage structures, or barns and waters of the State excluding subsurface water;
3. 500 feet between waste storage lagoons, waste storage structures, 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.
For all operations with more than 1000 AU, the waste disposal system shall be designed and operated such that it does not cause Nitrate Nitrogen (NO\textsubscript{3}-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 (NO\textsubscript{3}-N) to exceed 10 mg/l as described.

For all operations with more than 1000 AU, a setback shall be maintained of 100 feet between wetted areas or waste disposal areas and waters of the State excluding subsurface water (ground water). As a compliance alternative, the owner may substitute the 100 feet setback with a 35 feet wide vegetated buffer where waste disposal is prohibited.

For all operations with more than 1000 AU, 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 structure or series of lagoons or structures. The number, location, design, and construction specifications of the monitoring wells shall be included in the NMP. 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.

For all operations with more than 1000 AU, the permit will contain specific requirements for monitoring the waste storage 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), Nitrate Nitrogen (NO\textsubscript{3}-N) and Total Phosphorus (TP) as well as semiannual monitoring of the wells for TKN and NO\textsubscript{3}-N.

For all operations with more than 1000 AU, the permittee must submit an annual report to the Division. The annual report must include the items specified in the permit.

For all operations with more than 1000 AU, 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 or structures within twenty-four months. Proper closure of a lagoon or structure entails removing all waste from the lagoon or structure and land applying it at agronomic rates, and in a manner so as not to discharge to any surface water.

Any failure to comply with any condition of (a) through (n) 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.

**Certified Operator - Training and Certification Requirements for Operations With Liquid Manure Handling Systems.**

AFOs shall have certified operators prior to beginning the AFO.

AFO certified operators shall 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.

Certification training, agenda, and topics will be determined by the Georgia Department of Agriculture; but will include, at a minimum, best management practices, 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.