

CHAPTER 62-670 FEEDLOT AND DAIRY WASTEWATER TREATMENT AND MANAGEMENT REQUIREMENTS

62-670.100	Scope/Intent/Purpose. (Repealed)
62-670.200	Definitions.
62-670.400	Requirements for Concentrated Animal Feeding Operations.
62-670.500	Requirements for Dairy Farms in the Lake Okeechobee Drainage Basin.
62-670.510	Management Practice Requirements. (Repealed)
62-670.520	Setback Distances. (Repealed)
62-670.530	Ground Water Quality Monitoring Requirements. (Repealed)
62-670.540	Permit Requirements. (Repealed)
62-670.600	Wastewater Treatment for Commercial Egg Production Facilities.
62-670.900	Forms. (Repealed)

62-670.200 Definitions.

Terms used in this Rule shall have the meaning specified below. The meaning of any term not defined below may be taken from definitions in other rules of the Department, unless such meaning would defeat the purposes or intent of this rule.

(1) "Animal feeding operation" means a lot or facility (other than an aquatic animal production facility) where the following conditions are met:

(a) Animals have been, are or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; and

(b) Crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.

(c) Two or more animal feeding operations under common ownership are deemed to be a single animal feeding operation if they are adjacent to each other or if they utilize a common area or system for the disposal of wastes.

(2) "Animal unit" means a unit of measurement for an animal feeding operation 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 55 pounds multiplied by 0.4, plus the number of sheep multiplied by 0.1, plus the number of horses multiplied by 2.0.

(3) "Concentrated animal feeding operation" means a feeding operation where more animals are confined than are specified in the categories listed below. Any animal feeding operation that contains process wastewater and runoff from the 25-year, 24-hour storm event, is not considered a concentrated animal feeding operation regardless of the number of animals at the facility.

(a) 1,000 slaughter and feeder cattle,

(b) 700 mature dairy cattle (whether milked or dry cows), except that dairy farms located in the Lake Okeechobee Drainage Basin as defined in Rule 62-670.200(8), F.A.C., shall be regulated pursuant to Rule 62-670.500, F.A.C.,

(c) 2,500 swine weighing over 55 pounds each,

(d) 500 horses,

(e) 10,000 sheep or lambs,

(f) 55,000 turkeys,

(g) 100,000 laying hens or broilers (if the facility has continuous overflow watering),

(h) 30,000 laying hens or broilers (if the facility has a liquid manure handling system),

(i) 5,000 ducks, or

(j) 1,000 animals units.

(4) "Dairy Farm" means any operation as defined in Rule 5D-1.001(49), F.A.C., and regulated by the Florida Department of Agriculture and Consumer Services.

(5) "Egg production facility" means a commercial facility housing laying hens or cleaning, sorting and preserving eggs.

(6) "Egg wash wastewater" means wastewater generated as a result of cleaning, sorting and preserving eggs.

(7) "High intensity use area" means all areas of concentrated animal density generally associated with milking barns, feedlots, holding pens, travel lanes and contiguous milk herd pasture where the permanent vegetative cover is equal to or less than 80 percent, under average annual worst-case conditions, as determined by USDA Soil Conservation Service methods.

(8) "Lake Okeechobee Drainage Basin" means the drainage basin consisting of the following sub-drainage basins:

(a) lower Kissimmee River basin below structure S-65;

(b) Taylor Creek – Nubbin Slough basin;

(c) Fish Eating Creek basin;

(d) Indian Prairie and Harney Pond basins;

(e) C-41A basin;

(f) Nicodemus Slough basin; and

(g) drainage areas tributary to the South Florida Water Management District Pump Stations designated as S-127, S-129, S-131, S-133, S-135, S-2, S-3, and S-4. The geographical boundaries of these sub-basins shall be as designated by the South Florida Water Management District in its Technical Publication 81-2, May, 1981.

(9) "Liquid manure system" means a system for conveyance of manure which uses water.

(10) "Major egg production facility" means an egg production facility which has:

(a) More than 100,000 laying hens, or

(b) More than 30,000 laying hens when the facility has a liquid manure system, or

(c) On site facilities which process at least the number of eggs produced by 100,000 laying hens, not necessarily from on site hens, on a daily basis.

(11) "Man-made" means constructed by man and used for the purpose of transporting wastes.

(12) "Management Plan" means a site-specific detailed plan, with design calculations, providing for collection, storage and disposal of all wastewater from the milking barn, and of the runoff from the 25-year, 24-hour storm event from all "high intensity" areas within the dairy farm. In addition, the plan shall include provision for implementation of required management practices. Such plan shall be prepared in accordance with the standards of the USDA Soil Conservation Service and shall include detailed instructions for operation and maintenance of wastewater/runoff collection, storage and disposal systems.

(13) "Process generated wastewater" means water directly or indirectly used in the operation of a feedlot for any or all of the following: Spillage or overflow from animal or poultry watering systems; washing, cleaning or flushing pens, barns, manure pits or other feedlot activities; direct contact swimming, washing or spray cooling of animals; and dust control.

(14) "Process wastewater" means any process generated wastewater and any precipitation which comes into contact with any manure, litter of bedding, or any other raw material or intermediate product used in or resulting from the production of animals or poultry or direct products.

(15) "25-year, 24-hour Storm Event" means the amount of rainfall within 24 hours that is likely to be exceeded on the average only once in 25 years, as published by the U.S. Weather Bureau in Technical Paper 40 "Rainfall Maps for 24-hour Rainfall Amounts for the Coterminous United States."

Specific Authority 403.051, 403.061, 403.087, 403.804 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.087, 403.088 FS. History—New 11-27-89, Amended 4-2-90, Formerly 17-670.200, Amended 12-26-96.

62-670.400 Requirements for Concentrated Animal Feeding Operations.

(1) Any person discharging or proposing to discharge pollutants from a concentrated animal feeding operation shall file an application for a permit with the Department.

(2) Each application must be filed on DEP Form 62-620.910(3) and completed in accordance with the instructions provided in such form.

(3) Case-by-Case Designation of Concentrated Animal Feeding Operations. Notwithstanding any other provision of this section, the Secretary or authorized designee may designate as a concentrated animal feeding operation any animal feeding operation not otherwise falling within the definition provided in Rule 62-670.200(3), F.A.C. In making such designation, the Secretary or authorized designee shall consider the following factors:

(a) The size of the animal feeding operation and the amount of wastes reaching waters of the State;

(b) The location of the animal feeding operation relative to waters of the State;

(c) The means of conveyance of animal wastes and process waste waters into waters of the State;

(d) The slope, vegetation, rainfall, and other factors relative to the likelihood or frequency of discharge of animal wastes and process waste waters into waters of the State; and

(e) Other such factors relative to the significance of the pollution problem sought to be regulated.

(f) Provided, however, that no animal feeding operation with less than the number of animals set forth in Rule 62-670.200(3), F.A.C., shall be designated as a concentrated animal feeding operation unless such animal feeding operation meets either of the following conditions:

1. Pollutants are discharged into waters of the state through a man-made ditch, flushing system or other similar man-made device; or

2. Pollutants are discharged directly into waters of the state which originate outside of and pass over, across, through the feeding operation or come into direct contact with the animals confined in the operation.

(4) In no case shall a permit application be required from a concentrated animal feeding operation designated pursuant to this section until there has been an onsite inspection of the operation and a determination that the operation should and could be regulated under the permit program. In addition, no application shall be required from an owner or operator of a concentrated animal feeding operation designated pursuant to this section unless such owner or operator is notified in writing of the requirement to apply for a permit, and the basis for imposing such requirement.

Specific Authority 403.051, 403.061, 403.087, 403.804 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.087, 403.088 FS. History—New 11-27-89, Amended 4-2-90, Formerly 17-670.400, Amended 12-26-96.

62-670.500 Requirements for Dairy Farms in the Lake Okeechobee Drainage Basin.

(1) The discharge of untreated wastewater and runoff from dairy farms may reasonably be expected to be a source of pollution to waters of the state. The purpose of Rule 62-670.500, F.A.C., is to control pollution of waters of the state due to the discharge of wastewater and runoff from dairy farms in the Lake Okeechobee Drainage Basin to surface and ground water.

(2) Rule 62-670.500, F.A.C., shall be applicable to all dairy farms in the Lake Okeechobee Drainage Basin as defined in Rule 62-670.200(8), F.A.C. Regulation of dairy farms in other drainage basins under this rule will be proposed upon a determination by the Department that such additional regulations are required to insure that water quality standards are met or maintained.

(3) Discharge of dairy farm wastewater and runoff to waters of the state shall not cause or contribute to a violation of water quality standards.

(4) The system of practices, specified in Rule 62-670.500(5) through (8), F.A.C., for collection and recycling of wastewater by proper land disposal, together with the associated management practices, is established for the purpose of determining compliance with water quality standards. Implementation of these practices will be presumed to provide reasonable assurance that the facility will meet water quality standards in waters of the state.

(5) Fencing.

(a) All dairy cattle, including dry cows and heifers, shall be fenced away from all watercourses, or drainage ditches with a drainage area of 100 acres or more, that will transport storm runoff to surface waters. All new and replacement fences shall be located no closer than 25 feet from the top of the side slopes of the drainage or from the stream bank of natural watercourses. The area between the fence and the watercourses or drainage ditches may be used for forage crop production and shall be so managed as to attenuate the loads of nutrients carried to surface waters. Additional fencing may be required by the management plan on the basis of site-specific factors.

(b) Milk Herd Concentration. The high intensity use area shall be so managed as to encourage congregation of the milk herd in the area. Permanent structures, and watering and feeding facilities shall be located in contiguous high-intensity use areas, whenever practicable, to promote maximum waste/runoff collection.

(c) Barn Waste and High Intensity Runoff. All wastes and flushings from milking barns and runoff from high intensity use areas shall be centrally collected for storage and disposal by land application, or treated prior to discharge. The size of the high intensity use area is expected to vary on a site-specific basis. It is the intent of this rule that this area shall be minimized through adoption of appropriate site designs and management practices developed in the management plan. It is contemplated that in many cases existing high intensity areas will be reduced in size, thus minimizing the amount of runoff to be collected.

1. The design of lagoons, storage ponds and other impoundments for barn wastes and runoff from "high intensity use" areas shall be based on total containment of effluents for the longest anticipated period between emptyings. The volume should be large enough to store inputs from accumulated manure and wash water, direct rainfall on the pond, and the runoff contributed to the facility for the period minus losses expected due to evaporation. The design will provide for storage of runoff from the 25-year, 24-hour storm event. Runoff shall be determined in accordance with the USDA Soil Conservation Service procedures. The design and construction of the waste management facilities should conform to the criteria contained in the local SCS Field Office Technical Guide.

2. The storage facilities shall be cleaned periodically to remove accumulated sludge, debris or other solids so that their effective capacity (design volume) to provide adequate storage of wastes and runoff before land application will not be reduced. The bottom of the storage facilities shall be sealed, when necessary, to prevent leakage of the contents to the surrounding ground water.

(d) Land Application. Land application of all wastes (solids, sludge, runoff and wastewater) shall be managed to maximize water quality benefits derived from plant uptake of nutrients.

1. The nutrient content of all wastes shall be determined at least quarterly before spreading and the wastewater and runoff shall be applied to meet nutrient requirements of the crops. If the nutrient analyses show consistent results, the frequency of the analysis may be reduced. The degree of consistency required and the specific changes in the frequency of analysis shall be specified in the permit.

2. All sources of nutrients applied shall not exceed the annual nutrient requirements of the grasses or crops in the area.

3. The water table shall be eighteen (18) inches or deeper below the normal ground surface when wastes are applied to the land.

4. Irrigation with wastewater and runoff shall be managed so that no irrigation water is discharged to the surface waters of the state.

5. The frequency and rate of land application shall be managed to avoid secondary environmental problems such as severe odors, insect and pest problems, and other nuisance conditions. If wastes are to be disposed of on property not owned by the permittee, evidence of an appropriate lease or contract shall be provided for inclusion in the management plan.

(e) Alternative to Land Application. As an alternative to land application, the Department may consider other methods of treatment and disposal of barn wastewater and runoff from high intensity areas. Limits for such treatment or disposal methods will be based on applicable Department rules.

(6) Setback Distances.

(a) All dairy farms that originated after June 3, 1987, shall maintain the following minimum setback distances between storage and treatment facilities, or high intensity areas and

Drinking Water Supply Wells:	300 feet
Natural Watercourses:	200 feet
Drainage Ditches:	100 feet

(b) All dairy farms that originated after June 3, 1987, shall maintain the following setback distances buffer zones between land application areas, and

Drinking Water Supply Wells:	200 feet
Natural Watercourses:	50 feet
Drainage Ditches:	50 feet

(c) Distances other than those in (a) and (b), above shall be specified in the permit if the Department determines based on information provided in the application that because of the type of soils and hydrogeology of the sites involved, a larger distance is necessary to protect the designated uses of the waters, or that allowance of a smaller distance will not impair the designated uses of the waters.

(d) Systems that existed prior to June 3, 1987, shall be evaluated on a case-by-case basis regarding their proximity to water supply wells and surface water bodies and their water quality impacts. A report on this evaluation shall be included in the management plan as required in Rule 62-670.500(8)(a)3., F.A.C.

(7) Ground Water Quality Monitoring Requirements.

(a) Ground water near the storage ponds and land application areas shall be monitored for the following parameters on a quarterly basis:

Total Nitrogen	(as N)
Nitrate Nitrogen	(as N)
Total Phosphorus	(as P)
Ortho Phosphorus	(as P)

(b) Background water quality shall also be monitored on wells up gradient of ground water flow to the storage ponds and land application sites. The locations and depths of monitoring wells shall be specified in the permits. The monitoring frequency of any parameter may be reduced to semi-annual if more than six consecutive samples show no increase in the concentration of that parameter. These requirements are in lieu of the requirements of Rule 62-28.700(6), F.A.C.

(8) Permit Requirements.

(a) Existing Dairy Farms.

1. By December 3, 1987, the owners or operators of all dairy farms in existence on June 3, 1987, are to have provided the Department with information concerning their operations, including:

- the number of acres in the dairy farm
- the number of milking barns on the farm and the number of acres for each barn
- herd size for each barn
- a copy of any current Soil Conservation Service Management Plan(s) for the dairy farm.

2. By December 3, 1987, any dairy farm in existence on June 3, 1987, which is not in compliance with the practice specified herein is to have demonstrated to the Department that it has formally requested such a management plan from the local Soil and Water Conservation District or that it has contracted with a licensed professional engineer for such a plan.

3. On June 3, 1989, all dairy farms in existence prior to June 3, 1987, are to have submitted to the Department:

a. A management plan prepared by the Soil Conservation Service or a Florida licensed professional engineer that will bring the farm into compliance with the requirements of this rule; and

b. An application for a construction or operation permit on forms 62-620.910(1) and 62-620.910(3), F.A.C., to be provided by the Department, which application shall include the ground water monitoring program as required under Rule 62-670.500(7), F.A.C. Any construction permits issued under this rule shall set a date for completion of construction and compliance with this rule.

4. A new management plan shall be prepared and submitted to the Department should there be any plan to increase the number of animals or change the manner of disposal of the wastes.

5. All dairy farms in existence prior to June 3, 1987, shall have completed construction in accordance with their permit as soon as practicable but no later than 18 months from the date of issuance of the construction permit.

(b) New Dairy Farms. Dairy farms originating after June 3, 1987, shall submit an application to the Department for a construction permit together with a management plan prepared by the SCS or a professional engineer licensed to practice in the State of Florida.

Specific Authority 403.051, 403.061, 403.087, 403.804 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.087, 403.088 FS. History—New 11-27-89, Amended 4-2-90, Formerly 17-670.500, Amended 12-26-96.

62-670.600 Wastewater Treatment for Commercial Egg Production Facilities.

(1) Statement of Intent.

(a) The purpose of Rule 62-670.600, F.A.C., is to control pollution of waters of the state due to the discharge of wastewaters and run off from major egg production facilities. Discharge of process wastewater and runoff from any major egg production facilities. Discharge of process wastewater and runoff from any major egg production facility to surface waters is prohibited except in the event of a 25-year, 24-hour storm event. This rule establishes treatment and ground water monitoring requirements for major egg production facilities that have a discharge to ground water.

(b) Rule 62-670.600, F.A.C., applies to and requires permits for all major egg production facilities as defined in Rule 62-670.200(10), F.A.C., except major egg production facilities with dry manure systems that combine egg wash wastewater with the dry manure and dispose of it in accordance with an approved Soil and Water Conservation District Board (SWCDB) Plan.

(2) Permitting Requirements for Egg Production Facilities.

(a) All major egg production facilities which generate wastewater must have wastewater treatment, containment and disposal facilities permitted by the Department prior to their construction or operation. Permits will be issued if reasonable assurance is provided by the applicant that the requirements of this rule and other applicable Department rules will be met.

(b) Permit applications shall be submitted on DEP Form 62-620.910(3). A copy of the facility's approved Soil and Water Conservation District Board (SWCDB) Plan shall be submitted, if available, with the application.

(c) Major egg production facilities operating at the time this rule comes into effect shall submit to the Department an application for an operation permit. This application shall be submitted by October 1, 1990. No such application is required if such a facility is operating under a Department industrial wastewater permit. Existing permits will be modified to meet the requirements of this rule upon renewal of the permit.

(d) Egg production facilities not defined as major egg production facilities shall be exempt from permitting, provided all process wastewater and runoff from a 25-year, 24-hour storm event is contained, unless it is reasonable to expect that the facility will cause or contribute to water quality violations.

(3) Disposal and Treatment of Egg Wash Wastewater.

(a) Pretreatment. To enhance additional treatment by the soil, the permittee shall provide pretreatment of the egg wash wastewater prior to spray irrigation or other land disposal systems approved by the Department. Pretreatment systems shall be designed, operated, and monitored so as to provide reasonable assurance that aerobic conditions can be maintained at the soil surface of the sprayfield and that long term operation will not result in ponding or runoff of applied wastewater. Minimum pretreatment required prior to spray irrigation shall consist of the following:

1. Sedimentation using a settling tank or clarifier to reduce settleable solids and, if needed, scum removal using skimming devices to reduce floating solids prior to discharge to the sprayfield.
2. Aeration adequate to maintain an aerobic condition within the pretreatment system.
3. Neutralization or adjustment of treated effluent to a pH ranging from 6.5-8.5 (standard units).
4. Additional treatment necessary to provide reasonable assurance that oils, detergents, solvents, cleaners, or other substances will not be present in the pretreated effluent in such quantities or concentrations so as to interfere with the spray irrigation (land disposal) system.

(b) Sprayfield (Land Disposal) System Operation. Pretreated egg wash wastewaters disposed of by sprayfield or land disposal systems shall meet the following design and operation requirements:

1. Nutrient and hydraulic loading rates and resting cycles shall be comparable with the rates described in Rule 62-610.423, F.A.C., and those expressed in the U. S. Environmental Protection Agency process design manual, "Land Treatment of Municipal Wastewater" (EPA 625/1-81-013), Chapter 4 – Slow Rate Process Design, adopted herein by reference.

2. Hydraulic loading, application rates and application methods shall be such that odors will not be generated beyond the property boundary of the facility and ponding or soil binding will not occur under normal operating conditions.

3. Long-term sprayfield (land disposal) operation shall provide for crop harvesting as needed to maintain nutrient removal and to maximize performance. Routine maintenance of sprayheads, risers, or other distribution equipment shall be performed as needed to assure optimal operation.

4. Storage of pretreated wastes shall not be required if the sprayfield (land application system) has adequate hydraulic capacity to accept waste during wet-weather periods. The permittee must provide reasonable assurance runoff will not occur during wet-weather periods. Failure to provide reasonable assurance will result in a requirement for adequate storage.

5. Spray irrigation shall be prohibited where the seasonal high ground water level is 18 inches or less.

6. Setback Distances.

a. The following setback distances shall be maintained between land application areas, and

Drinking Water Supply Wells:	200 feet
Natural Watercourses:	50 feet
Drainage Ditches:	50 feet

b. Distances other than those listed above may be specified in the permit if the Department determines that because of the type of soils and hydrogeology of the sites involved, a larger distance is necessary to protect the designated uses of the waters, or that allowance of a smaller distance will not impair the designated uses of the waters.

(4) Disposal of Egg Wash Wastewater Combined with Manure.

(a) Liquid Manure Systems.

1. Egg wash wastewater combined with chicken manure in a liquid manure system shall be routed to regularly maintained settling basins prior to disposal via ponds or lagoons. The ponds and lagoons shall contain process water and runoff from a 25-year, 24-hour storm event.

2. The pretreatment steps specified in Rule 62-670.600(3)(a), F.A.C., are not required for egg wash wastewaters disposed of in ponds or lagoons which are also used for liquid manure treatment.

3. Ponds lined sufficiently to prevent ground water pollution shall be used for on-site treatment or storage when an aquifer classified as G-I or G-II as defined in Rule 62-3.403, F.A.C., may be subject to contamination.

(b) Dry Manure Systems.

1. Egg wash wastewaters combined with dry manure are subject to the requirements of an approved Soil and Water Conservation District Board (SWCDB) Plan. This plan must include management requirements for disposal of the dry manure and provisions to control the runoff from any manure disposal areas.

2. Those facilities not having an approved SWCDB plan must have a permit pursuant to this rule.

(5) Ground Water Monitoring Requirements for Egg Production Facilities. All major egg production facilities are required to perform ground water monitoring and submit ground water monitoring plans pursuant to Rule 62-528.700, F.A.C. This rule establishes the minimum information to be provided in such plans. Requirements of this rule shall supersede any conflicting requirements contained in Rule 62-528.700, F.A.C. Ground water monitor wells shall be installed and monitored as specified below. The location of monitor wells shall be specified in Department permits. The minimum number of monitor wells and frequency of sampling may be increased or decreased based on site specific hydrogeologic factors and the potential for ground water contamination.

(a) Egg Wash Water Spray Sites.

Monitor Wells	Parameters:	Sampling Frequency:
Required:		
One up gradient	Total Nitrogen	Quarterly
One down gradient	Nitrates	
	Fecal Coliform	
	Specific Conductance	
	pH	
	Depth to Ground Water	
	Ground Water	
	Elevation	

(b) Unlined Lagoon Systems.*

Monitor Wells	Parameters:	Sampling Frequency:
Required:		
One up gradient	Total Nitrogen	Quarterly
Three down gradient	Nitrates	
	Fecal Coliform	
	Specific Conductance	
	pH	
	Depth to Ground Water	
	Ground Water	
	Elevation	

* In addition an inventory of all supply wells located within a 1/2 mile radius of the site must be provided.

(c) Lined Lagoon Systems.

Monitor Wells	Parameters:	Sampling Frequency:
Required:		
One down gradient	Total Nitrogen	Quarterly
	Nitrates	
	Fecal Coliform	
	Specific Conductance	
	pH	
	Depth to Ground Water	
	Ground Water	
	Elevation	

(d) Unlined Hen Houses.

Monitor Wells	Parameters:	Sampling Frequency:
Required:		
One down gradient	Total Nitrogen	Quarterly
	Nitrates	
	Fecal Coliform	

Specific Conductance
pH
Depth to Ground Water
Ground Water
Elevation

Specific Authority 403.051, 403.061, 403.087, 403.804 FS. Law Implemented 403.021, 403.051, 403.062, 403.087, 403.088 FS. History—New 4-2-90, Formerly 17-670.600, Amended 12-26-96.