



NEW FEDERAL CAFO RULES:

Which Pennsylvania Livestock and Poultry Operations Will Be Affected?

APRIL 2003 UPDATE

New CAFO Rules

If an animal operation is a CAFO under Pennsylvania's current program or may be in the future, it is the PA DEP revision of the current PA CAFO program that is going to affect most operations.

In December 2002 the federal water quality rules for Concentrated Animal Feeding Operations (CAFOs) were changed for the first time in 25 years. In Pennsylvania, regulations for CAFOs are administered and enforced by the Pennsylvania Department of Environmental Protection (PA DEP). The PA DEP will be renegotiating with the U.S. Environmental Protection Agency (USEPA) and revising the Pennsylvania CAFO permit program in 2003 and 2004.

If an animal operation is a CAFO under Pennsylvania's current program or may be in the future, it is the PA DEP revision of the current PA CAFO program that is going to affect most operations. However, some operations not currently participating in the PA CAFO program (such as poultry and expanded operations falling under the new federal large CAFO definition, and newly constructed CAFOs) will have a duty to apply for a permit prior to PA DEP revising the program. To ensure compliance with the new federal regulations, farmers should contact PA DEP for the most up-to-date PA CAFO permit information. Contact information for PA DEP, USEPA, and

other sources is on page 6 of this publication.

The regulatory requirements for CAFOs aim to ensure that appropriate actions will be taken to manage manure effectively and to protect the quality of our water resources. The regulations will financially impact Pennsylvania livestock and poultry producers required to comply with the regulations as well as provide environmental and health benefits for citizens of the Commonwealth. All stakeholders—farmers, agribusinesses, community organizations, and environmental groups—need to stay informed in order to take advantage of public participation opportunities that will shape the state's future CAFO policies and programs.

This publication explains why USEPA revised the federal CAFO rules, highlights the major changes in the rules, outlines the process PA DEP will undertake to incorporate the new federal requirements into the existing Pennsylvania CAFO program, and provides guidance to Pennsylvania producers to help them determine if they will need a permit and how they may be affected. It also includes a list of educational resources.

Even if a farm is not a CAFO now, future business decisions should take these regulations into account. Farm expansion or regulatory changes that redefine which Pennsylvania animal operations are CAFOs may mean that a permit is needed. Non-CAFOs will benefit by learning about the regulations. These farms can identify practices that can be taken to protect water quality and avoid penalties associated with violations of the federal Clean Water Act. Possible permit requirements should be considered early in the process when planning changes to an animal facility. Plenty of time and professional help may be required.

Who's Affected?

Will the new USEPA CAFO rules apply to your farm or one in your area? Table 1 provides general guidance for different types and sizes of animal operations. It is important to note that the new federal regulations allow for *any* livestock or poultry operation to be designated a CAFO if it is a significant source of water-quality pollution. Therefore, an operation could be affected even though it has fewer animals than listed in the following table.

Table 1. New federal CAFO rules: Who's affected?

<p>Operations meeting the definition of a large or medium CAFO under the current PA CAFO regulations.</p>	<p>Operations meeting the definition of a large CAFO under new USEPA species-specific animal number thresholds because the operation has at least:</p> <ul style="list-style-type: none"> • 2,500 mature swine • 10,000 immature swine • 1,000 head of beef cattle • 700 head of mature cows • 1,000 head of heifers • 1,000 veal calves • 82,000 laying hens • 125,000 broiler chickens • 55,000 turkeys • 30,000 ducks with dry manure handling systems • 5,000 ducks with liquid manure handling systems 	<p>Operations meeting the definition of a medium CAFO under new USEPA rules because the operation has:</p> <ul style="list-style-type: none"> • a ditch or pipe carrying manure or wastewater from the operation to surface waters, or animals come into contact with surface water running through the confinement area, <i>and</i> the operation has at least: • 750 mature swine • 3,000 immature swine • 300 head of beef cattle • 200 head of mature cows • 300 head of heifers • 300 veal calves • 25,000 laying hens • 37,500 broiler chickens • 16,500 turkeys • 10,000 ducks with dry manure handling systems • 1,500 ducks with wet manure handling systems 	<p>Operations designated as a small CAFO because they are significant contributors to water pollution.</p>
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Why Did USEPA Change the CAFO Rules?

The federal Clean Water Act of 1972 established a comprehensive program to protect water quality through a permit program for “point” sources of water pollution. The USEPA created two rules in the 1970s that affected animal agriculture:

1. The National Pollution Discharge Elimination System (NPDES) permit program, which defined farms needing a discharge permit as CAFOs; and
2. Effluent Limitations Guidelines (ELGs), which set technology and performance requirements for CAFOs.

States were charged with implementing NPDES permitting. While 45 states, including Pennsylvania, took responsibility for this program, the progress in implementation was criticized as slow and ineffective in protecting water quality from the pollution contributions of a changing animal agricultural sector. Nationally, permitting was found to be inequitable in terms of regional and state

differences and the animal species included in the program. A Natural Resources Defense Council lawsuit was filed against USEPA for failing to adequately implement the law. It led to a court order requiring the agency to revise and update the federal CAFO rules by December 2002.

USEPA's New CAFO Regulations

USEPA estimates there are 1.3 million livestock and poultry operations throughout the nation. Approximately 238,000 of these operations are confinement operations defined as animal feeding operations (AFO). The new CAFO regulations apply to approximately 15,500 of these AFOs. USEPA estimates that Pennsylvania has 462 CAFOs.

Major revisions to the federal NPDES CAFO regulations include:

- **Immature Animal Stand-Alone Operations.** Operations raising immature animals, such as heifer raising operations and swine nurseries, are now included in the federal CAFO program.

- **Poultry Operations with Dry Litter.** Large poultry operations, regardless of the type of waste disposal system used or whether the litter is managed in dry or wet form, are included in the federal CAFO program. The regulations distinguish between broiler and layer operations, due to the differences in manure phosphorus content.
- **Both Production and Land Application Areas Are Subject to NPDES CAFO Permit.** The production area (the animal confinement, manure storage, raw material storage, and wastewater containment areas) and the application of CAFO manure, litter, or process wastewaters to land under control of the CAFO (owned, rented, or leased) are subject to NPDES permit requirements.
- **Nutrient Management Plan.** All CAFOs must develop and implement a nutrient management plan. Nutrient management plan requirements for large CAFOs are discussed in the effluent limitations guidelines section below. PA DEP has discretion in determining

nutrient management plan requirements for medium or designated CAFOs.

CAFO permits require operators to comply with specific design and operating standards. *General* permits are for similar types of CAFO operations discharging the same waste, which have similar design and operating requirements under the permit. An *individual* permit requires design and operating standards that are applicable only to one specific farm. These permits usually require greater time and information to develop and therefore entail greater cost than general permits.

Both general and individual CAFO permits must include effluent limitations—the primary mechanism for controlling pollutant discharges to surface waters. Effluent limitations guidelines (ELGs) are technology-based requirements that apply nationwide to those operations that are defined as large CAFOs. For medium or designated CAFOs in Pennsylvania, effluent limitations are based on the best professional judgment of the PA DEP.

Major revisions to the federal ELGs for CAFOs include:

- **“No Discharge” Requirement for NEW Large Swine, Poultry, and Veal CAFOs.** New large swine, poultry and veal CAFOs must meet the “no discharge” requirement for the production area by designing, constructing, operating, and maintaining the animal confinement, manure storage, raw material storage, and wastewater containment areas to contain all manure, litter, process wastewater, and the direct precipitation and runoff from a **100-year, 24-hour** rainfall event. Examples of waste storage facilities that may meet this requirement include covered or indoor facilities such as under-house manure pit storage systems and litter storage sheds.
- **Maintain 100-Foot Setbacks.** Large CAFOs must maintain a 100-foot setback from any down-gradient surface waters, open-tile line intake structures, sinkholes, agricultural well heads, or other conduits to surface waters. A

setback is an area where manure, litter, or other process wastewater is *not* applied, but crops may continue to be grown. As a compliance alternative, the CAFO may elect to establish a 35-foot vegetated buffer. The USEPA and PA DEP may establish additional compliance alternatives at a later date.

- **Nutrient Management Plan Requirements.** Nutrient management plan requirements for large CAFOs include: adequate storage of manure and proper operation and maintenance of storage facilities, animal mortality management, diversion of clean water (for example, roof runoff) from the production area, no direct contact of confined animals with surface waters, proper chemical disposal, conservation practices identification, manure and soil testing, and record keeping.
- **Phosphorus Management.** Large CAFOs applying manure to land that is owned, rented, or leased by the CAFO must minimize nitrogen (N) and phosphorus (P) transport to surface waters. Application rates are to be based on “state technical standards” established by the PA DEP.

Meshing USEPA’s New Requirements with the Current PA CAFO Program

The PA DEP initiated its CAFO program development in 1998, undertaking an extensive stakeholder involvement program. The program was finalized in November 1999 and implemented beginning in February 2000. More than 125 CAFO permits were issued by the end of 2002. Pennsylvania’s CAFO program has been well integrated with the state’s Nutrient Management Act (Act 6) requirements for concentrated animal operations (CAOs).

In 2003 and 2004, the PA DEP will review, analyze, and revise the state CAFO program. As of April 2003, identified steps in this process included:

- A formal stakeholder committee to provide guidance on incorporating the new USEPA CAFO regulations into the existing PA CAFO program;
- Approval of the revised PA CAFO regulations by the Pennsylvania Environmental Quality Board, a 20-member independent board that adopts all PA DEP regulations;
- Publication of final PA CAFO program regulations in the *PA Bulletin*, the Commonwealth’s official gazette for information and rule-making;
- Concurrent policy deliberations by the Pennsylvania State Conservation Commission concerning the Pennsylvania Nutrient Management Act (Act 6) regulations

For the most up-to-date information on the PA CAFO program revision process, see the list of educational resources at the end of this publication.

TIME LINE

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December 15, 2000
Draft federal CAFO rules released by USEPA.

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December 15, 2002
USEPA announced the final CAFO rule.

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February 12, 2003
Final CAFO rule was published in the Federal Register.

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April 14, 2003
The CAFO rule becomes effective. State permitting authorities begin the process of incorporating the new regulations into current CAFO programs.

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2003–2005
Pennsylvania has 1–2 years to revise its CAFO program.

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December 31, 2006
All CAFOs must implement nutrient management plans.

Implications for Pennsylvania Livestock and Poultry Producers

Direct effects of the new USEPA CAFO rule on Pennsylvania producers will depend on current farm size,

status of current compliance, and the outcome of the USEPA/PA DEP negotiations for the PA CAFO program. As the negotiations proceed, look for additional updates on the Nutrient and Water Policy UPDATE Web site (<http://agenvpolicy.aers.psu.edu>).

The implications for operators permitted under the current PA CAFO program and those operators that likely will be affected under the new USEPA CAFO rule are explored in Table 2.

Table 2. New federal CAFO rules: What are the implications for Pennsylvania producers?

<i>Description of Operation</i>	<i>Implications for Pennsylvania Livestock and Poultry Producers</i>
A livestock confinement operation that is defined as a large CAFO under the current Pennsylvania CAFO regulations.	Some changes to the NPDES CAFO permit may be required. The revised federal CAFO rules include new ELGs for field applications of animal waste that were not part of the PA CAFO requirements. This is particularly significant for the explicit consideration of phosphorus-based nutrient management planning.
A livestock or poultry confinement operation that is defined as a large CAFO under new USEPA species-specific animal number threshold, but not under the current Pennsylvania CAFO program. See Table 3.	The new USEPA CAFO regulations established species-specific animal number thresholds to define a large CAFO. Some of the animal number thresholds are less than the animal equivalent unit (AEU) thresholds currently used in the PA CAFO program. Unless the differences in the thresholds are resolved during the negotiations between the USEPA and state agencies, some additional large farms that are not currently participating will likely have a duty to apply for an NPDES permit. The discrepancy is greatest in the swine and poultry categories (see Table 3). Compliance with the permit ELGs is likely to be easier for farms with adequate, implemented, and documented land application management efforts than farms with intensive animal enterprises on limited land area. There may also be some farms that did not meet the large CAFO animal unit threshold or the CAO density definition of the Pennsylvania Nutrient Management Act because of abundant land, but that will now be included in the federal regulatory program based solely on the number of animals alone.
A livestock confinement operation that is defined as a medium CAFO under the current Pennsylvania CAFO program.	PA DEP is the primary agency responsible for determining the permit requirements for medium CAFOs. As of April 2003 it is not known if permit requirements for these operations will change. However, Pennsylvania Clean Streams Act requirements, such as following the PA DEP <i>Manure Management for Environmental Protection</i> manual, will continue to apply.
A livestock or poultry confinement operation that is defined as a medium CAFO under new USEPA definition, but not under current PA CAFO program.	The current PA CAFO program is unique because medium CAFOs are both “concentrated animal operations” (CAOs) as defined under the Pennsylvania Nutrient Management Act and exceed the 300 AEU threshold. As of April 2003 it is not known if the program will change. However, Pennsylvania Clean Streams Act requirements, such as following the PA DEP <i>Manure Management for Environmental Protection</i> manual, will continue to apply.
A livestock or poultry confinement operation that does not meet the definition of a CAFO under the current Pennsylvania regulations and has less than the species-specific animal number thresholds for a medium CAFO under the new USEPA CAFO regulations.	If the operation is not a significant source of water pollution (meaning it is not designated as a CAFO by PA DEP), the CAFO regulations do not apply. However, Pennsylvania Clean Streams Act requirements, such as following the PA DEP <i>Manure Management for Environmental Protection</i> manual, will continue to apply. These operators should be aware of the PA CAFO requirements especially if they anticipate expanding their animal operations in the future.

Table 3. New federal CAFO rules: How do the new animal numbers defining LARGE CAFOs compare to the existing PA CAFO program?

<i>Species</i>	<i>EXISTING PA CAFO PROGRAM</i>	<i>NEW USEPA CAFO RULE</i>
	<i>Animal Equivalent Units Converted to Animal Numbers*</i>	<i>Animal Numbers**</i>
Swine		
Finishing	6,897+	2,500+
Sows	2,500+	2,500+
Nurseries	33,333+	10,000+
Beef		
Finishing	1,176+	1,000+
Dairy		
Mature cow (Holstein)	769+	700+
Heifer	1,111+	1,000+
Cow+replacements	388+	-
Veal	4,000+	1,000+
Poultry		
Ducks (liquid manure system)	281,000+	5,000+
Ducks (dry litter)	*Only poultry operations with wet manure systems subject to CAFO permit (none currently permitted under PA CAFO program).	30,000+
Layer (dry litter)		82,000+
Broiler (dry litter)		125,000+
Turkey (dry litter)		55,000+

* Under the existing PA CAFO program, the number of animals equal to 1,000 animal equivalent units were estimated using Penn State Agronomy Fact Sheet 54, 1997. (<http://www.agronomy.psu.edu/Extension/Facts>)

** USEPA CAFO rules apply only to individual species and animal age classes.

COMMON ACRONYMS

AFO: Animal Feeding Operation

CAFO: Concentrated Animal Feeding Operation

USEPA: U.S. Environmental Protection Agency

PA DEP: Pennsylvania Department of Environmental Protection

ELGs: Effluent Limitations Guidelines

NPDES: National Pollutant Discharge Elimination System

Important Considerations for Pennsylvania Farmers and Citizens

The expanded scope of the federal CAFO program will affect animal agriculture, the environment, and communities in Pennsylvania. The regulations have important implications for water quality and human health in the Commonwealth and for our downstream neighbors. All stakeholders need to stay informed in order to take advantage of public participation opportunities to shape the state’s future CAFO policies and programs.

Farmers considering options to expand their operations should investigate the animal number thresholds in the federal and Pennsylvania CAFO programs. It will be important to ensure that the necessary permits and technical materials are prepared if those thresholds will be exceeded. Building a new operation or expanding an old one may be among the best times to develop compliance procedures and plan for implementation efforts.

The additional costs related to compliance may actually be a factor in the decision to proceed or in selecting the specific size of operation that is constructed. However, even new or expanding operations with fewer animals than the large CAFO thresholds when completed should consider future compliance requirements in case the animal number thresholds would be lowered or the operation were to be designated a CAFO. Management options are often easier to consider and to financially account for when facilities are planned rather than after they are built. Taking advantage of this opportunity to plan comprehensively should increase future farm profitability.

Where to Find More Information

Regulations affecting animal agriculture in Pennsylvania will be evolving in the near future. In this time of changing policies and programs, animal agriculture and water quality stakeholders should stay abreast of developments and participate when opportunities arise. To obtain more information:

- Visit the following Penn State Web sites:

Nutrient and Water Policy Update:
<http://agenvpolicy.aers.psu.edu>

Nutrient Management:
<http://www.nutrient.psu.edu>
- Contact your local County Conservation District, phone numbers are listed on the Web at:
<http://www.dep.state.pa.us/directory/>
- Contact PA DEP (NPDES Permitting Authority): Cedric Karper, Phone: 717-783-7577; E-mail: ckarper@state.pa.us
- Contact USEPA Region 3: Hank Zygmunt, Phone: 215-814-5750; E-mail: Zygmunt.Hank@epamail.epa.gov
- Review the PA DEP *Manure Management for Environmental Protection* manual on the Web at:
<http://panutrientmgmt.cas.psu.edu/>
(click on Technical Resources)
- *PA Bulletin*:
<http://www.pabulletin.com/>

DEFINITIONS

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Animal Equivalent Unit (AEU): Defined under the Pennsylvania Nutrient Management Act as 1,000 pounds of live weight of any animal.

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Animal Feeding Operation (AFO): An operation that confines animals for at least 45 days in a 12-month period with no grass or other vegetation in the confinement area during the normal growing season.

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Concentrated Animal Feeding Operation (CAFO): These operations are defined as point sources under the Clean Water Act (CWA). The CWA prohibits discharges of pollutants from point sources, including CAFOs to surface water, unless in compliance with a National Pollutant Discharge Elimination System (NPDES) permit.

.....
Concentrated Animal Operation (CAO): Defined under the Pennsylvania Nutrient Management Act as any animal operation with more than 2,000 pounds of live weight per acre (2 AEU per ac) of land available to spread manure.

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Discharge: An addition of any pollutant to surface waters from a point source, including surface runoff and storm water, which is collected or channelized and discharges through pipes or other conveyances that do not lead to a treatment works (Source: 25 PA Code, Chapter 92.1).

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Duty to Apply: Operations that meet the definition of a CAFO have a “duty to apply,” meaning it is the operator’s responsibility to obtain, complete, and file paperwork with the PA DEP.

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Effluent Limitations Guidelines (ELGs): Technology-based requirements for the production and land application areas that apply nationwide to operations defined as large CAFOs.

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Point Source Pollution: Point source means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, . . . concentrated animal feeding operation . . . from which pollutants are or may be discharged

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Technology-Based Requirements: Standards for pollution reduction shown to be achievable as a result of implementing appropriate control technology, such as best management practices.

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This publication was produced in cooperation with the Mid-Atlantic Regional Water Quality Project funded by the USDA Cooperative State Research, Education and Extension Service's Section 406 Water Quality Competitive Grants Program.

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Penn State College of Agricultural Sciences research, extension, and resident education programs are funded in part by Pennsylvania counties, the Commonwealth of Pennsylvania, and the U.S. Department of Agriculture.

This publication is available from the Publications Distribution Center, The Pennsylvania State University, 112 Agricultural Administration Building, University Park, PA 16802. For information telephone 814-865-6713.

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Issued in furtherance of Cooperative Extension Work, Acts of Congress May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture and the Pennsylvania Legislature. T. R. Alter, Director of Cooperative Extension, The Pennsylvania State University.

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Produced by Information and Communication Technologies in the College of Agricultural Sciences

CAT UA382 1M403ps ICT4602

