

Animal Agriculture and the Environment

Do you need a VPA permit?

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Environmental regulations are of serious concern to livestock producers across Virginia, and the pace of regulatory activity is only accelerating. Given changes in the Virginia Pollution Abatement (VPA) permit program made in 1998, many farmers previously not covered are beginning to ask if they might need a permit after all. This article is intended to clarify any misunderstandings about which farmers are required to obtain permits.

The Department of Environmental Quality (DEQ) issues both General and Individual permits for confined animal feeding operations (CAFOs). A CAFO with more than 200 mature dairy cattle, or more than 300 animal units (1000 lbs liveweight) that utilizes a liquid manure collection and storage system must be covered by a VPA Permit. Several parts of that definition have been subject to misinterpretation, so DEQ recently issued guidance on interpretation of the law to clarify these issues.

General vs. Individual permits

Most permits issued are General permits. General permits are intended to be easier to apply for, and some requirements of the General permit are less stringent than the Individual permit. To be eligible for a General permit, a CAFO must handle liquid waste and have more than 300 confined animal units. To obtain a General permit, a farm must be in compliance with all requirements of the permit (adequate manure storage, nutrient management plan in place, etc., see below) at the time the General permit is obtained.

An Individual permit, on the other hand, may be issued to herds of any size if a potential or actual discharge of waste to state waters is documented. Individual permits often include a schedule for compliance. An individual permit, therefore, is most likely to be issued when a farm is polluting, is working toward solving the problem, but isn't in compliance yet.

As most permits issued are General permits, this article will focus on identifying herds that automatically qualify for a General permit. DEQ identifies three key questions to help you determine if your operation requires a permit. These are:

- Are any animals confined?
- Do I collect and/or store liquid waste?
- How many animals do I have confined?

Definition of confinement

A CAFO is an operation that confines livestock (for feeding, milking, maintaining, etc.) in an area that is not covered by any vegetation for a total of 45 days in any 12 month period and collects and stores waste. DEQ does not want to time cows to see how long they are in the

milking parlor or being fed under confinement, so if animals are confined (i.e., on a bare feed lot or concrete floor) for any part of the day, they are considered confined for the entire day. Significantly, the process of milking is considered confinement.

Definition of liquid waste

Manure handled as a liquid or slurry is obviously considered liquid waste, but contrary to common perception, farms that handle manure in dry form are not off the hook. Milking center waste (waste milk and water to wash equipment) is generated on all dairies, and is considered liquid waste. By definition, then, all dairy farms handle liquid waste.

Am I big enough to require a permit?

With these first two definitions, **all** dairy farms that milk cows confine their animals and generate liquid waste, so size of the operation becomes the critical question. The regulation states that operations with greater than 300 animal units confined must obtain a permit.

There has been much discussion over how to calculate the number of mature dairy cows and their animal unit equivalents. VPA regulations cover 200 mature dairy cattle, milking **or** dry, or 300 AUs under confinement. Importantly, Virginia uses the ratio of 1.4 animal units per mature dairy cow, regardless of breed. Animal units for **other** confined groups (i.e. heifers, calves, etc.) are calculated using the equation (Average animal weight, lbs./ 1000 lbs.) x total animals in group = Total AUs in group. To calculate a grand total of confined animal units for the operation, add up the total AUs from confined mature dairy cattle and all other confined groups.

Can you give me some examples?

*Farms that **DO** require permits:*

Example 1. A dairy with 340 animals, 250 milking cows. Of the 250 that are milked, 150 head are confined in a barn, and 100 head have use of an adjoining pasture. The 90 head that are not milked includes 30 mature dry cows and 60 heifers that are pastured. No other animals are fed with the milked cows. This farm has a liquid waste system that handles manure from the barn and parlor washwater. This farm requires a permit because 250 milking animals are confined (milked = confined), and the farm utilizes a liquid manure collection system. The 90 head that are pastured and not milked do not count toward the total AUs for VPA purposes, because they are not confined.

Example 2. A 290-head dairy with 190 cows milked and confined to a barn. Manure and milking center wastewater is stored in liquid form in an earthen storage facility. Thirty mature dry cows that are pastured next to the barn are fed every day in one end of the barn. 70 heifers are pastured and not fed in the barn. This farm requires a permit because 308 animal units are confined (190 head milked plus 30 mature dry cows fed in the barn x 1.4 AUs / cow), and the farm uses a liquid waste handling system

Example 3. Same as Example 2, but the 30 mature dry cows are confined in one end of the barn and their manure is dry-stacked and land applied. This farm still requires a permit because 308 AUs are considered confined and it utilizes a liquid waste system. Whether all 300

confined animal units contribute to the liquid manure storage system is **not** a criteria for deciding on the need for a permit.

Example 4. A 360-head dairy, with 220 milking cows. Manure is dry-stacked for land application. Parlor washwater is stored in two 6,000-gallon tanks and is land applied. Of the 140 head not milked, 70 are dry cows and 70 are young heifers, all of which are pastured and not confined. Again, this farm requires a permit because more than 200 mature cattle are confined, and the farm utilizes a liquid waste system. For VPA purposes, milking center wastewater and liquid manure are both considered liquid waste.

Example 5. A farm operates on both sides of a main road. On one side of the road, the farm milks 140 barn-housed cows and has earthen storage for manure and parlor washwater. Twenty-five dry cows are pastured on this side of the road, and are not fed under confinement. On the other side of the road, heifers and beef feeder cattle are fed in a lot that was part of the original dairy operation. The barn lot is used in the winter months for approximately 120 days. Manure is pushed and stacked for land application. Three groups of animals are fed: 60 young heifers (average weight = 600 lbs); 60 older heifers (average weight = 1000 lbs); and 40 beef feeder cattle (average weight = 1000 lbs). All of the farm's acreage is utilized for the land application of manure generated on both sides of the road.

• (140 head milked x 1.4 AUs / cow)	=	196 AUs
• (60 young heifers x 600 lbs/heifer) / 1000	=	36 AUs
• (60 older heifers x 1000lbs/heifer) / 1000	=	60 AUs
• (40 beef feeder cattle x 1000lbs) / 1000	=	40 AUs
Total Confined	=	332 AUs

This farm does require a permit, because more than 300 animal units are confined, and it utilizes a liquid waste storage facility. The key is that this is considered one operation by DEQ, not two. VPA permit regulations states that “two or more confined animal feeding operations under common ownership are considered ... to be a single confined feeding operation if they adjoin each other **or** if they use a common area [manure application fields] or system for the disposal of wastes”. This example meets both of these conditions.

One point to consider: If the 40 beef feeder cattle in this example were pastured and not fed on the lot, then this operation would **not** meet the size requirements to automatically require a permit, because only 292 AUs would be considered confined.

*Farms that do **NOT** meet criteria to automatically require permits*

Example 6. Farm has 280 animals, with 190 milking cows. Of the 190 that are milked, 100 head are confined in a barn, and 90 head have use of an adjoining pasture. Of the 90 head that are not milked, there are 25 mature dry cows and 65 heifers that are pastured. This farm has only 266 animal units confined (190 cows x 1.4 AUs/cow), so does not automatically require a permit. Again, the 90 head that are pastured and not milked do not count toward the total AUs for VPA purposes, because they are not confined.

Example 7. Just like example 4, except this is a 290-head dairy. The farm milks 170 cows and dry-stacks their manure for land application. Parlor washwater is stored in two 6,000-

gallon tanks and is land applied. Of the 140 head not milked, 70 are dry cows and 70 are young heifers, all of which are pastured and not confined. This farm has less than 200 mature cows (300 animal units) confined, so does not automatically qualify for a permit.

I don't meet those definitions, so I don't have to worry about this, right?

Wrong. Even if a farm does not automatically qualify for the VPA General permit or a VPA Individual permit (i.e., 200 mature dairy cattle or 300 animal units), it still must comply with all federal and state laws and regulations. Specifically, the Clean Water Act states that no individual shall pollute the surface waters of the United States. The DEQ does have the authority to require smaller operations to obtain an Individual permit if the farm is a potential or actual contributor of pollution to state waters.

So I need a General permit. What does that involve?

The primary requirements of the General permit include:

- A completed registration statement form including the name and address of the owner and the types and maximum number of animals to be maintained at the facility. The owner must certify that all neighbors have been given this information.
- A completed DEQ Local Government Ordinance Form indicating the approval of the local government
- A Department of Conservation and Recreation approved Nutrient Management Plan that addresses the manure applications, revised every three years
- Annual inspections by DEQ of the waste storage system, manure application records and application fields
- Annual manure sampling, soil sampling every three years, groundwater monitoring of earthen storage facilities in certain circumstances
- Manure and soil analysis records and nutrient field application records maintained onsite for five years
- Adequate waste storage capacity to accommodate periods when the ground is frozen or saturated, or periods when there is little or no crop nutrient uptake. Usually, this means 120 days of storage, unless the Department of Conservation and Recreation (DCR) approves otherwise in a Nutrient Management Plan. Even operations like in example 4 that do not store manure as a liquid must still have sufficient storage for parlor washwater, if the number of confined mature dairy cattle is greater than 200.

This issue of who does and does not need a permit is becoming more and more time-urgent. All farms that qualify for a VPA General permit must be covered by a General or Individual permit, or file a registration statement to start the process of obtaining a General permit by July 1, 2000. If you have any questions concerning the details of the VPA permit process or requirements, contact your DEQ Regional Office.