

Animal Agriculture and the Environment

Meeting the new VPA permit requirements

*by Dr. Katharine Knowlton, Research Scientist, and Dr. Jerry Jones, Extension Dairy Scientist
Virginia Tech Department of Dairy Science*

Environmental regulations are of serious concern to livestock producers across Virginia, and the pace of regulatory activity is only accelerating. Significant changes in the Virginia Pollution Abatement (VPA) permit program made in 1998 will affect many Virginia farmers. Understanding these changes is critical for all farmers, particularly those who will be required to obtain permits. Major changes in the program are covered in Table 1, and the key requirements are discussed below.

Table 1. Significant changes in VPA permit program

Old requirement	New requirement
Manure storage requirement varied, 1' freeboard	120-150 days storage, plus 1' freeboard
No training of farm operators required	Training required every three years
Inspection of permitted farms every five years	Inspection annually
Letter indicating approval of nutrient management plan required in application	Copy of actual NMP required
No neighbor notification required for general permit	Adjoining landowners must be notified
Records maintained for two years	Records maintained for five years

First, some background. Under the authority of the Federal Clean Water Act, Virginia regulates the treatment, storage and land application of industrial and sewage sludge, animal waste, and treated wastewater. The VPA permit program has been the primary regulatory tool used by the state since 1994. These VPA permits are issued to large animal feeding operations to authorize land application of animal waste or sewage sludge.

The state continues to define large operations as those with 300 animal units or more and utilizing a liquid manure storage system. An animal unit is 1000 pounds of liveweight, so a Holstein farm with more than 200 mature cows and a manure storage pit or tank is required to have a permit. Multiple farms under common ownership are considered one operation if they adjoin each other or use a common area or system for waste disposal. What some farmers may not be aware of is that from the start of the VPA program, the Department of Environmental Quality (DEQ) has had the authority to require smaller operations to obtain a permit if direct discharge of waste into surface waters is documented.

Applications for general permits must be filed six months before the start of construction of a new operation, or six months before expiration of the previous permit, and applicants must pay a \$200 fee. The application must include a copy of a certified nutrient management plan, a

form indicating the approval of the local government, and a registration form including the name and address of the owner and the types and maximum number of animals to be maintained at the facility.

A component of the application package causing some concern is a certification that notice of the application for a permit has been sent to adjoining landowners. This notice to neighbors must include the types and maximum number of animals to be maintained at the farm, as well as the DEQ office address and phone number. If a neighbor or any individual wants to challenge the issuing of a general permit, they may submit written comments to the DEQ within 30 days of the filing of the permit application. The director of DEQ then has 45-60 days from the original filing to decide whether to require the farmer to file for an individual permit instead of a general permit.

In another change, the application must now include a copy of the actual nutrient management plan, rather than just a copy of the certification letter. The nutrient management plan required for a VPA permit is still based on nitrogen, but other requirements have become more stringent. In-ground waste storage facilities must have a synthetic liner at least 20 mils thick, or a compacted soil liner at least one foot thick that meets a stringent permeability test ($< .0014$ in/hr). Location of the storage system is also critical. The seasonal high water table must be at least 1 foot below the bottom elevation of the pit, and the pit cannot be built within a 100 year flood plain.

Also new, the nutrient management plan must include a strategy to dispose of manure if the farming operation is discontinued. Also, waste is to be analyzed at least once per year, soil is to be analyzed every three years, and under certain special conditions, groundwater analysis may be required as well. Either DEQ or the Department of Conservation and Recreation (DCR) may require more frequent or additional monitoring of waste, soil, or groundwater. Records of waste application and cropping program must be maintained and available for inspection for five years.

All operators of permitted farms must complete a training program offered by DCR within 6 to 12 months of submission of the registration statement and must complete this training program every three years. This training program is to be developed by DCR in consultation with both DEQ and Virginia Cooperative Extension.

One major modification in the VPA permit program grants DEQ the authority to inspect permitted operations annually. DEQ personnel who conduct the inspections will be trained, and Virginia Cooperative Extension is playing an important role in training these personnel. Training sessions were held at Virginia Tech in May to teach DEQ personnel about animal feeding operations, land application of waste, and the constraints farmers face in managing manure and nutrients. This training included discussion of soil properties, productivity and values; soil testing, fertilizer timing, and crop nutrient uptake; forages and row crops; manure handling, testing, and land application; and dairy production. The section on dairy production emphasized cost of milk production, protein and phosphorus in dairy rations, and cattle environments.

Perhaps the most significant change in the permit program for most farmers is that 120 to 150 days of manure storage capacity will be required for permitted operations, in addition to one foot of freeboard at all times. This represents a significant increase in storage for many farms, and farmers are being encouraged to move quickly to meet this requirement. All farms over 300 animal units must be either covered by a VPA individual permit or have applied for a VPA general permit by July 1, 2000. Farms not meeting this deadline will be fined.

It is not too soon to begin to plan how your farm will meet these new requirements. The sooner you begin to plan, the better you'll be able to take advantage of cost-sharing and tax credit programs available. Also, as the deadline approaches, nutrient management planners, facilities designers, and advisory personnel are likely to be swamped with requests for help. Starting now will help ensure that the people you need to consult with will have the time to work with you. These modifications of the VPA permit program represent a more stringent approach by lawmakers and state agencies to regulating livestock waste management to protect water quality. Now is the time to begin work toward meeting these requirements.