

Update on Environmental Regulations Affecting Animal Agriculture in SC

A quick review of the history of animal regulations in South Carolina will show that our State has made significant changes in the way animal facilities are regulated in the last 25 years. The Clean Water Act of 1977 mandated that each State develop a program to protect the waters of the State. In response to this Act, South Carolina's Department of Health and Environmental Control (DHEC) developed environmental guidelines for animal facilities. These guidelines provided the first standards for the permitting of animal agriculture facilities in the United States. All new facilities were required to obtain a permit to operate before animals could be placed in the facility.

These guidelines served South Carolina well for a number of years. In the early 90's, however, the rapid expansion of the poultry and swine industries in the Southeast created an increased awareness of potential environmental concerns related to large animal-confinement facilities. As these concerns matured, many conflicts moved to the courts for resolution. In court, the legal status of the SC guidelines was often questioned, as they were not legislatively adopted regulations. To address this issue, the South Carolina legislature mandated the development of regulations to address the permitting and operation of animal agriculture facilities in the State. The first draft of these regulations for swine operations was adopted in 1996. In 1998, regulations for all other animal agriculture operations were adopted. It was stipulated that these first regulations be reviewed and revised after a fixed period. The process of review and revision for these facilities is now underway. It is anticipated that the revised regulations will be presented to the legislature in January 2002, and they would become effective July 2002.

So, what are some expected changes? Although the review process is only partially complete, there are some changes that appear to be fairly certain. Many of the changes are probably attributable to one of two situations. First, some of the original wording was vague and did not stand up in court. These sections of the regulations will be rewritten to clarify any ambiguity. Second, some of the well-intentioned ideas did not work well in the real world. These sections of the regulations will be changed to provide more realistic solutions to address the issues. Although the overall scope and content of the regulations will not change significantly, some specific components will be modified a great deal.

Some tentative changes include:

- 1) Currently, lagoons must have a natural and synthetic liner. Experience has shown that using both is not feasible. The new regulations will require one or the other, but not both.
- 2) Currently, soil samples in fields where manure is applied must be taken four feet below the surface. Experience has shown that sampling at this depth is difficult to achieve, may not provide accurate results,

and is probably not necessary. The new regulations will limit the depth of the soil samples.

- 3) Currently, the disposal of mortality in a pit is approved as long as the bottom of the pit is above the high water table level. To reduce the potential for ground water contamination, the new regulations will require that the bottom of the burial pit be two feet above the high water table level. Sites of concern can be further restricted from pit disposal.
- 4) A greater emphasis will be placed on the application of phosphorus to the land. The regulations will follow current NRCS recommendations which include that no phosphorous can be applied to land that has 500 pounds per acre of phosphorous. Additionally, a soil phosphorous index will be used to calculate phosphorous application rates. This index provides a site-specific recommendation based on site characteristics such as slope, presence of impaired waterways, rainfall, and erosion potential.
- 5) Although manure brokers are covered in current regulations since they apply manure to the land (similar to the farmer or land owner), the new regulations will include a section to specifically address the certification and regulation of manure brokers.
- 6) Education and certification of animal facility operators will be expanded to include all confined animal facility operators. Large swine operators will have to be certified, others will be required to take a waste management course, but there will not be any certification process.
- 7) There will be more emphasis on the role and responsibility of integrators in the management of waste produced on contract farms.

Concurrent to the modification of the regulations in South Carolina, the United States Department of Agriculture (USDA) and the Environmental Protection Agency (EPA) are in the process jointly of developing a "Unified National Strategy for Animal Feeding Operations (AFOs)". This federal action was initiated to address situations in some states where the states have minimal or no regulations for the operation of animal facilities. South Carolina will be less affected by the federal regulations than many states, due to South Carolina's existing regulations. Like the revisions on South Carolina's regulations, the federal program is still in the process of being developed. A brief summary of existing regulations and the new application of these regulations follows:

Under current federal regulations (Clean Water Act), facilities with over 1,000 animal units (approximately 1,000 beef cows) are called concentrated animal feeding operations (CAFOs) and are currently required to be permitted under the National Pollutant Discharge Elimination System (NPDES). These facilities are considered as "point source" systems and are regulated the same as any other industries that produces point source pollution. Of the approximately 10,000 CAFOs in the U.S. approximately 2,000 facilities have NPDES permits.

Animal facilities with over 300 animal units that discharge directly into waterways are also considered CAFOs and are required to have NPDES permits. Animal facilities less than 1,000 animal units are not considered CAFOs and are not required to have a NPDES permit. These smaller facilities (AFOs) are expected to voluntarily develop comprehensive nutrient management plans (CNMP) that address issues of feed management, manure handling and storage, land application of manure, land management, and record keeping. Additionally, AFOs of any size can be deemed CAFOs if they are “significant contributors to water quality impairment”.

So, without any change to federal regulations, EPA has the authority to require a NPDES permit for CAFOs which are defined as:

- 1) Animal facilities over 1000 animal units
- 2) Animal facilities over 300 animal units that discharge into a waterway
- 3) Animal facilities of any size that are considered to be significant contributors to water quality impairment.

EPA estimates that by simply enforcing existing federal regulations the number of NPDES permitted animal facilities will increase from the current 2,000 level to an estimated 15,000 – 20,000 units.

One additional change that could significantly affect the number of animal facilities that are required to have NPDES permits is a change in the definition of a CAFO. There has been some discussion of reducing the number of animal units to 500 (from the current 1,000) level. This change would mean that NPDES permits would be required for almost all of the existing commercial swine and poultry farms in the United States.

The Total Maximum Daily Load (TMDL) Rule

On July 13, 2000, the US EPA published its Final TMDL Rule¹ designed to fulfill the Goals of the Clean Water Act. A TMDL or Total Maximum Daily Load represents the maximum amount of pollutants that a body of water can absorb and still meet clean water standards. The goal of the rule is to clean up thousands more American rivers, lakes and coastal waters so that they will be safe for swimming and fishing and for fish and shellfish. Under the Final Rule, states will identify and prioritize all polluted waterbodies. The states will have ten years to develop these lists, but may be granted an additional five years if needed. EPA is requesting that waters used for drinking water or that support endangered species be given higher priorities.

A TMDL will identify polluted waterbodies, their particular pollutants and the desired water quality standard for each. Allowable amounts of pollutants will be specified along with the reduction in pollutant loads required to meet the water quality standards. Point sources of pollution will be given wasteload allocations. The effects of runoff and other pollution sources will be considered and an implementation plan developed. The plan will consider a safety margin, seasonal variation and foreseeable increases in pollutant loads. States will be allowed to phase in the new TMDL requirements during a transition period. The Final Rule allows flexibility to the states as to which waters are polluted and which are to be cleaned up first.

Unlike the proposed rule, "the Final Rule does not include specific permit requirements for forestry, and EPA withdraws its proposed provisions for expanded authority for permitting aquaculture and animal feeding operations."

¹ <http://www.epa.gov/owow/tmdl/finalrule/>