

Getting My Barn Built - Update on Regulations - U. S. Perspective

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■ Introduction

Swine producers in both Canada and the United States have learned to appreciate the impact of environmental regulations. It is virtually impossible to develop new production facilities without having to comply with state/provincial environmental regulations. During the last ten years confined animal feeding operation (CAFO) regulations have frequently changed. Swine producers can anticipate that environmental regulations will continue to be more complex and stringent. Any producer planning to construct a new facility or make major renovations to existing CAFOs should carefully review all existing and anticipated regulations sufficiently in advance of construction so that full compliance can be achieved.

Most states in the United States have specific regulations regarding CAFOs. As I will discuss below these regulations are influenced by the U. S. Environmental Protection Agency (USEPA) and the United States Department of Agriculture (USDA) through the Natural Resources Conservation Service (NRCS). Recent actions by both USEPA and NRCS will have significant impact on the swine industry in the near future and will likely influence regulations.

■ Regulations at the Federal Level

Until very recently the basic tenets of CAFO regulations at the federal level had not changed in the United States since 1972 (Clean Water Act Amendments). State regulations that were developed based on the 1972 federal legislation defined an *animal unit* (typically 2.5 mature swine over 25 kg equals one animal unit) and established a permitting requirement for swine facilities with 1000 or

more animal units. Most states have adopted the 1000 animal unit standard. In addition there was a prohibition for discharging wastes to the waters of the United States even if a CAFO holds a valid permit unless the discharge was the result of a storm of greater intensity than the 25 year, 24 hour storm. The emphasis on the 1972 legislation was the protection of surface waters.

The USEPA has the responsibility and authority to regulate CAFOs. Most states have received delegated authority to enact and supervise specific state regulations as long as the state's regulations are at least as stringent as the federal rules and encompass the basic philosophy presented in the 1972 legislation.

On December 15, 2002 the USEPA is scheduled to make public new regulations and guidelines that are intended to place additional requirements on existing CAFOs and restrict the types of manure systems than can be utilized for new CAFOs. Undoubtedly these regulations will be adopted by all delegated states and probably the non-delegated states as well within a two to three year time period. Therefore, we can anticipate a new round of regulation development.

We already know that one of the requirements of the new USEPA regulations will be for each CAFO to have and maintain a Comprehensive Nutrient Management Plan (CNMP). The CNMP is intended to be a "living" manure management plan. That is, a plan that is frequently updated based on decisions made through use of required site records and any changes to the facility including changes to cropping programs.

The 2002 Farm Bill dramatically increased the funding for the USDA Environmental Quality Incentive Program (EQIP) for Fiscal Year 2003 (started in October 2002). EQIP funding is scheduled to increase significantly each year for the next few years. Sixty percent of the EQIP money will be directed to CAFOs to help them meet the new USEPA requirements. The EQIP money can be spent for manure management system improvements. Any qualifying producer - private or corporate - can be eligible for up to \$450,000 in EQIP money if their project meets the NRCS evaluation criteria. Producers interested in EQIP money must have a CNMP. At present only the Natural Resources Conservation Service (NRCS-USDA) and qualified technology providers can write CNMPs. The NRCS in several states has determined that the agency will not be able to write all of the CNMPs that will be required. Therefore, there will be a defined need for using non-NRCS personnel to write many of the needed CNMPs. Each state is establishing their own criteria regarding the qualification criteria for non-USDA persons to be able to write CNMPs.

CNMPs must be developed to meet certain NRCS codes and practices. These codes and practices can be state-specific and may not always coincide with state regulations. Therefore, in the development of a CNMP it is very important

to be familiar with the NRCS codes and practices of given state as well as the state's CAFO regulations. The codes and practices for the different states can be found in the state's Field Office Technical Guide (FOTG).

The FOTGs for all states can be found at the following web site:

<http://www.nrcs.usda.gov/technical/efotg/>

To find a given state's FOTG you will need to click the state in question on the US map.

■ Regulations at the State Level

State CAFO regulations vary tremendously from state to state often reflecting the socio-political climate within a given state. The following are observations regarding state CAFO regulations:

- State regulations are often tiered based on facility livestock population. Facilities with larger populations face stricter, more comprehensive regulations.
- Most states require some form of public notification and public participation during the permit evaluation process.
- The life of permits can vary from essentially perpetual with annual renewals to a requirement for renewal at set intervals - typically once every five years.
- States typically have a defined liner criteria for earthen storages. Both earthen and flexible membrane lined (FML) earthen containment ponds are allowed.
- Some states require ground water monitoring wells.
- Many states require certifications of treatment cell volume and/or lack of hydrologic connection (potential to impact an aquifer) of treatment cell liners.
- Most states have some form of setback distance from non-producer residences and public areas.
- Interpretation of CAFO regulation by regulatory agencies can vary widely. Sometimes there are variations in interpretation at the regional level within a state.
- Some states such as Iowa are developing specific siting (matrix) criteria that will be used to rank a given proposed facility at a given location.
- Regulatory agencies in different states can take on a posture in dealing with new and proposed CAFOs of anywhere from friendly to adversarial.

Because of the lack of uniform CAFO state regulations it is imperative that the producer have a thorough understanding of the environmental regulations for all of the states where the producer may have an interest in working. **Table 1** lists the web addresses needed to access regulations for many livestock producing states.

Table 1. Web addresses for CAFO regulations

Arkansas Department of Environmental Quality	www.adeq.state.ar.us/
Alabama Department of Environmental Management	www.adem.state.al.us/
Arizona Department of Environmental Quality	www.adeq.state.az.us
California Environmental Protection Agency	www.swrcb.ca.gov/
State of Colorado Department of Agriculture	www.ag.state.co.us/
Connecticut Department of Agriculture	www.state.ct.us/doag/
Florida Department of Environmental Protection	www.dep.state.fl.us
Georgia Department of Agriculture	www.agr.state.ga.us
Hawaii Department of Agriculture	www.hawaiiag.org
Idaho Department of Environmental Quality	www.state.id.us/deq/
Illinois Environmental Protection Agency	www.epa.state.il.us
Illinois Department of Agriculture	www.agr.state.il.us/
Indiana Department of Environmental Management	www.in.gov./idem/
Iowa Department of Natural Resources	www.state.ia.us/government/dnr
Iowa Department of Agriculture and Land Stewardship	www.agriculture.state.is.us/
The Kansas Department of Health and Environment	www.kdhe.state.ks.us/
Kentucky Department of Agriculture	www.kyagr.com/
Louisiana Department of Environmental Quality	www.deq.state.la.us/
Maine Department of Agriculture	www.state.me.us/agriculture
Maryland Department of Agriculture	www.mda.state.md.us/
Michigan Department of Agriculture	www.michigan.gov/mda
Minnesota Department of Agriculture	www.mda.state.mn.us/

Mississippi Department of Agriculture and Commerce	www.mdac.state.ms.us/index.asp
Missouri Department of Agriculture	www.mda.state.mo.us
Montana Department of Environmental Quality	www.deq.state.mt.us
Nebraska Ag and Natural Resources	www.state.ne.us/agresources.html
State of Nevada Department of Conservation and Natural Resources	www.ndep.state.nv.us
New Hampshire Department of Environmental Services	www.des.state.nh.us
New York State Department of Environmental Conservation	www.dec.state.ny.us
North Carolina Department of Environmental and Natural Resources	www.enr.state.nc.us
North Dakota Department of Agriculture	www.agdepartment.com/
Ohio Department of Agriculture	www.state.oh.us/agr/
Oklahoma Department of Agriculture, Food and Forestry	www.oda.state.ok.us/
Oregon DEQ	www.deq.state.or.us/
Pennsylvania Dept of Agriculture	www.pda.state.pa.us/
South Carolina Department of Agriculture	www.scdca.state.sc.us/
South Carolina Department of Health & Environment	www.scdhec.net/
South Dakota Department of Environmental and Natural Resources	www.state.sd.us/denr/denr.html
South Dakota Department of Agriculture	www.state.sd.us/da/da.html
Tennessee Department of Agriculture	www.state.tn.us/agriculture/
Tennessee Department of Environmental Conservation	www.state.tn.us/environment/
Texas Department of Agriculture	www.agr.state.tx.us/index.html
Utah Department of Agriculture and Food	www.ag.utah.gov
Washington Department of Agriculture	www.wa.gov/agr/default.htm
West Virginia Department of Environmental Protection	www.dep.state.wv.us
Wisconsin Department of Agriculture, Trade and Consumer Protection	www.datcp.state.wi.us
Wyoming Department of Agriculture	http://wyagric.state.wy.us/

■ Understanding and Complying with CAFO Regulations

The following are important factors to consider regarding regulations when either developing a new swine production facility or renovating an existing facility where new regulations may have to be considered.

Regulatory Agencies

The producer needs to determine which regulatory agency(ies) have responsibility for regulating CAFOs in a given state. It is highly advisable for the producer visit with representatives of the state and local regulatory agencies early in the project development stage. Frequently this visit can help to establish a professional working relationship that will help the given project.

Applicable Regulations

The first item of business is to obtain a copy of the applicable state regulations. If the anticipated facility is in a non-delegated state you should also consider the USEPA CAFO regulations. The producer needs to study the regulations carefully. In many cases there will be a need to consult with the regulatory agencies more than once as well as a design professional that can help to determine the regulatory impact on the facility being planned.

Permits

As soon as possible in the planning of the proposed facility the producer should file an application for state permits/licenses with the appropriate state agencies. In some cases local permits may also be required.

CNMP

Plan on working with either NRCS or a qualified professional in developing a CNMP. In some states a copy of the CNMP or its equivalent will need to be submitted with the license/permit applications. The CNMP will cover a host of items including design of manure facilities, nutrient balances (nitrogen and phosphorus) and lack of hydrologic connection.

Facility Design:

The design of a facility will have to meet NRCS criteria if EQIP money is to be involved. There may be additional design criteria that have to be considered based on a given state's CAFO regulations.

Nutrient Balances:

Most states will require both a nitrogen and phosphorus balance. Many states either have developed or will be developing a Phosphorus Index (PI) that will dictate the rate of manure application based on the PI.

Hydrologic Connection:

This has to do with the design of the liner (earthen, metal, plastic, etc.) of any manure storage/treatment containment and the proximity to ground water. Subsurface geology must also be considered. Frequently it will be necessary to involve a geotechnology firm to develop the necessary documentation.

Know Your Enemies

It is important to know your likely enemies as you develop your facility's plans. A producer should have sufficient knowledge of the public sentiment towards a given CAFO project as possible. It is often time well spent to visit with responsible elected officials (local and state) and discuss your basic plans. It may be necessary to retain legal counsel to help guide you through the regulatory process and address issues that may be raised by your enemies. This is especially true for larger projects.

New Technology

The CAFO producer should evaluate all available new technology prior to determining which manure handling system will be utilized. It is important to visit with state regulatory agencies to determine if any special documentation will be required to support the use of any new technology being considered. It is always advisable to build as much redundancy into a manure management system as possible.

Site Selection

Site selection is probably the most crucial activity in the development of a new CAFO. It is highly recommended that professional services be utilized during the site selection process. Any candidate site should be evaluated based on state and local regulations. If at all possible multiple candidate sites should be considered.

■ Conclusion

New CAFO projects will continue to be permitted and constructed in states that do not have a moratorium. State and federal regulations will become more

stringent in the future. It will still be possible in many states to construct new CAFOs with appropriate planning. However, the cost of obtaining the necessary permits will be high. CAFO producers must become thoroughly familiar with CAFO regulations early in the project development stage.