

## **CAFOs, NPDES Permits and the 590 Standard: What does it mean for manure management?**

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Increased regulatory pressure, policy-driven programs designed to protect water quality, and a concern to make the most profitable use of manure resources are driving manure management issues. This session will look at some of the current events and practices, changes to the 590 Nutrient Management Standard, and some crystal-ball gazing related to manure nutrient management in Iowa.

### **Concentrated Animal Feeding Operation – CAFOs**

A concentrated animal feeding operation (CAFO) is an animal feeding operation (animals confined for at least 45 days, non-consecutive, where vegetation is not grown or maintained) that is defined as a CAFO based solely on size for “large CAFO” and by size and discharge criteria for a “medium CAFO.” An animal feeding operation may also be “designated” a CAFO if it does not meet the size requirements and “permitting authority finds it to be a significant contributor of pollutants to surface water”. At the time this paper was written, the state of Iowa was only using the term CAFO in terms of open lot facilities. The term “CAFO” is not defined in Chapter 65 of the Iowa Administrative Code for confinement feeding operations. It is important to note this significant difference in federal vs. state law. Iowa law does not allow confinement feeding operations (operations in which animals are confined to areas which are totally roofed) to discharge manure so consequently CAFO requirements such as NPDES permits have not been issued for confinement feeding operations in Iowa. This is currently a concern the Environmental Protection Agency (EPA) has with the permitting process in Iowa and is also one of the things that triggers the EPA to look for combined operations (open lot and confinements) as they do their flyovers.

Implementation of CAFO requirements for open lots, primarily beef and dairy operations in Iowa, is an on-going effort. In 2001, the Iowa Department of Natural Resources (DNR) initiated the “Iowa Plan for Open Feedlots”. The purpose of this plan was to help open feedlots comply with state and federal laws through a voluntary registration process that would prioritize environmental impacts of large CAFO feedlots (over 1,000 animal units; i.e. over 1,000 head beef or 700 head dairy). This program was developed with support from many partners and was deemed a success in moving the industry toward environmental compliance.

The follow-up to Iowa Plan for Open Feedlots is now focused at smaller beef and dairy feedlots- or those below the permit threshold of a large CAFO. The current effort is called the “Water Quality Initiatives for Small Iowa Beef and Dairy Feedlot Operations” or more commonly the “Small Feedlot Plan”. This initiative is an educational outreach and demonstration plan designed to assist small and medium size feedlots understand their potential impact on water quality. Education is focused on providing self-assessment materials for producers to use at their own livestock operation, including manure management practices, pen management, and even voluntary water sampling below feedlots. Additional education is focused at a series of field days that show different management practices and manure control structures to help small livestock operations protect water resources and the development of print materials to further identify water quality issues and highlight manure practices and control structures.

### **National Pollutant Discharge Elimination System Permits – NPDES Permits**

If an open lot livestock production systems meets the size and or discharge requirements to be defined as a CAFO, they are required by both federal and state law to have a NPDES permit to operate their livestock farm. This permit requires not only operational standards to be met, but also requires a nutrient management plan and a significant amount of recordkeeping.

In many situation livestock producer acknowledge the need for manure control structures or practices to help protect surface water, but many feel the permitting process and subsequent recordkeeping is too burdensome to manage. In some cases producers will take extra steps to protect water resources so they do not have to meet permit

requirements, in some cases, producers choose to ignore the requirements and “hope not to get caught”. In either case, we have to continue to provide outreach and educational materials that not only help producers make good choices, but that actually meet their needs for resource protection, time management and fiscal investment and appropriate use of nutrient resources.

## **NRCS 590 Nutrient Management Standard**

The 590 Nutrient Management Conservation Practice Standard provides guidance for Natural Resources Conservation Service technical assistance and programs involved in soil fertility, manure and commercial fertilizer management, and related water quality issues. The standard focuses on the 4Rs of nutrient management, apply the Right nutrient source at the Right rate at the Right time in the Right place to improve nutrient use efficiency by the crop and to minimize nutrient losses to the surface and groundwater and to the atmosphere.

At least every five years the 590 standard is updated to account for changes in technology, new information, and new ideas. The national 590 Nutrient Management Standard was released January 2012.

The new Iowa 590 Nutrient Management standard is being written and will be released the first quarter of 2013. It will be based on the national standard and adapted to Iowa. It has been technically reviewed by advisors from Iowa State University and Agricultural Research Service's National Laboratory for Agriculture and the Environment in Ames. Additional reviews are being provided by conservation partners in the Iowa Department of Agriculture and Land Stewardship and the Iowa Department of Natural Resources as well as agricultural industry, producer, and environmental representatives.

At the time of this writing, the Iowa 590 Nutrient Management Standard is still in draft form. At the time of the ICM Conference, the 590 will be going through final reviews before release for public comments sometime in December 2012. A preview of proposed changes will be provided. Watch for announcements at the Iowa NRCS website (<http://www.ia.nrcs.usda.gov>). Check the Technical Resources, Nutrient Management page.

## **What does this all mean for manure management?**

It is anticipated that in the next 12-18 months we will see changes to our state regulations in terms of CAFO operations and subsequently the use of NPDES permits. We will also see changes to the 590 standard that will encourage better use of manure nutrients. The usual complications will arise in the fact that agencies have different rules and goals. It is important to recognize how voluntary programs and educational outreach programs contribute to significant adoption of practices to protect water resources by livestock producers. It is also important that you know and understand what this means for your farm or for your clients.

## **References**

- Natural Resources Conservation Service. 2008. Conservation Practice Standard Nutrient Management Code 590 (Iowa). [http://efotg.sc.egov.usda.gov/references/public/IA/Nutrient\\_Management\\_590\\_STD\\_2008\\_12.pdf](http://efotg.sc.egov.usda.gov/references/public/IA/Nutrient_Management_590_STD_2008_12.pdf) (accessed 31 Oct 2012). Electronic Field Office Technical Guide. USDA, Des Moines, IA.
- Natural Resources Conservation Service. 2012. Conservation Practice Standard Nutrient Management Code 590 (National). [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/stelprdb1046896.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1046896.pdf) (accessed 31 Oct 2012). National Handbook of Conservation Practices. USDA, Washington, DC.