



January 2012

## Updates from Region 7 EPA

*Donna Porter, US EPA Region 7*

### The proposed NPDES CAFO Reporting Rule

- The comment period for the proposed NPDES CAFO Reporting Rule came to a close on January 19<sup>th</sup>, 2012. EPA received over 1400 comments. Most of the comments from industry and other stakeholders questioned EPA's authority to require information from unpermitted CAFOs under Section 308 of the Clean Water Act, while environmental groups/concerned citizens did not think the rule went far enough. Unlike some states in other EPA Regions, states in R7 have had regulatory livestock programs for 20 to 30 years and retain a database that contains all existing CAFOs, whether they have state or NPDES permits or need to submit a Manure Management Plan. At this point, EPA management is reviewing all comments and has not made any decision. According to the settlement agreement, EPA has until July 13<sup>th</sup> to propose a rule.

To view the comments, go to [www.regulations.gov](http://www.regulations.gov) and refer to document ID: EPA-HQ-OW-2011-0188. Click on view attachment (PDF) to read the comment.

### Personnel changes

- At EPA HQ, Allison Wiedeman has left to go on a year-long detail to the EPA Budget Office. In Region 7, Karen Flournoy was named the Division Director for the Office of Water. Previously, Karen was Deputy Director and then served as Acting Director for the last year. Effective January 29, 2012, Wayne Gieselman will become the Deputy Director of the Water Division. As many of you know, Wayne worked for a number of years as Division Administrator for the Iowa Department of Natural Resources (IDNR).

### Other updates/info/corrections

- Region 7 is still on schedule to move to a new office in Lenexa, KS. Estimate move time is this summer.
- The guidance is scheduled to be placed on the EPA website sometime in early February (goal is actually February 3<sup>rd</sup>). The guidance for the duty to apply portion will be incorporated later after EPA revises the regulations to comply with the 5<sup>th</sup> Circuit decision. EPA is currently in the process of removing "propose to discharge" from the regulations.
- With permission, EPA has placed the University of Nebraska's Nutrient Management Record Keeping Calendar on the EPA website. (<http://cfpub1.epa.gov/npdes/afo/info.cfm#guidedocs>) These calendars were handed out to producers during the Manure Expo held in Norfolk this year. The calendars contain all of the record keeping needed to be in compliance.
- Previously it was stated that if the NMP was incorporated by reference into a permit the entire NMP would become enforceable. Actually, only the terms that are required by regulations are enforceable. One NMP term that needs to be included requires a field-specific assessment of the potential for nitrogen and phosphorus transport from each field. To clarify, a nitrogen assessment is only needed if a facility has a potential to impact groundwater and is therefore a state determination.

## **New 590 Standard Likely to Lead to Closer Scrutiny of State P Indices**

*John A. Lory, Ph.D. State Nutrient Management Specialist, University of Missouri*

Release of the new 2012 National NRCS 590 standard has brought renewed focus on state Phosphorus (P) Indices in the Heartland region and across the US.

A P Index is used to determine if a P application will or will not lead to excessive P loss and to guide management decisions to reduce P loss from agricultural fields. Research and extension efforts across the US have led to the creation a unique P Index in each state. States also varied in the amount of testing and validation used in developing the State P Index. The lack of consistency in the results from running a P Index, particularly across adjoining state boundaries, has lead to criticism of the P Index approach and concern that it is not appropriately protective of water quality. For more information on concerns about the P Index as a tool for managing P applications see the January 2011 report "Revisions of the 590 Nutrient Management Standard: SERA17 Recommendations" available at <http://www.sera17.ext.vt.edu/Documents/590Recommends2011.pdf>.

To address these issues the new 2012 National 590 Standard and associated guidance documents recommend that all state P Indices be evaluated and every effort should be taken to insure that results of P Indices are standardized within regions of the US.

The Heartland Regional Project has been anticipating the concerns highlighted in the 590 Standard. We held a roundtable in February 2011 that brought together representatives from IA, KS, MO and NE including University researchers and extension, NRCS agency personnel and state regulators and representatives of EPA region 7. The roundtable set in place the groundwork for a regional effort to work together to demonstrate the effectiveness of our state P Indices and look for ways to regionalize implementation P Indices across the region.

Since that meeting a group of University and USDA Agricultural Research Service scientists have been meeting regularly by conference call to lay the groundwork for evaluating P Indices in the Heartland Region. We believe that an effort led within the region is more likely to meet the needs of each of our states.

This group just submitted a pre-proposal to the NRCS Conservation Innovative Grant (CIG) program for funding to support our effort to evaluate and update State P Indices in IA, KS, MO and NE. This proposal was one of three regional pre-proposals submitted (the other two coming from Chesapeake Bay states and a Southern states group).

Over the next three years there will be an effort to evaluate and improve state P Indices across the Heartland Region. A successful effort to fund this program through the NRCS CIG program will ease the process of identifying the funds needed for this evaluation of P Indices. If this proposal fails we will need to identify other resources to complete an evaluation of state P Indices.

Evaluating P Indices should improve confidence state P Indices. It will help demonstrate that P Indices correctly identify situations where P loss is high from academic fields. It will also more closely link P Index ratings with quantitative amounts of P lost from a field.

## **What about the Non-CAFO and AFO cattle sites and environmental impact?**

*Dr. Joel DeRouchey, Kansas State University*

Many cow-calf and small back grounding producers use temporary feeding sites over the winter and early spring months to provide supplemental forage and protection from cold weather conditions. While these sites are commonly used by producers effectively, an increased amount of manure accumulates in these sites that should be removed once cattle are taken to summer pasture. There are several reasons for cleaning including improved feeding site conditions for next year's use, reduced impact of nutrient and fecal bacteria runoff to surface water, and reduction of stable fly production. However, to have the largest impact on all of these, these sites need to be scraped and manure applied to fields by the end of May.

Producers need to recognize that in areas of winter feeding substantial levels of fecal bacteria and nutrients have accumulated. In fact, there are approximately 4.5 million fecal coliform bacteria per pound of material at a typical winter feeding site. If we assume 50 square feet for a single hay ring feeder and a total of 10 tons of wasted hay and manure mixture from this site, this equals approximately 90 billion fecal bacteria. Fecal bacteria present on these sites can survive in the manure/wasted feed material, especially surrounding round bale feeders for numerous months.

From an environmental standpoint, research clearly shows increased fecal bacteria levels in surface water in Kansas and other states during the spring and early summer months. One contributing factor to this is the runoff of fecal bacteria from the multitude of winter feeding sites, which are generally located in lower, sheltered areas that also have drainage to a small creek nearby. Since intense rainfalls begin to occur in April, runoff from these sites will occur if the manure is not properly cleaned and removed from the site.

Beyond the general sanitation and environmental impact from uncleaned feeding sites, is the abundant production of stable flies that occurs at these locations. These sites serve as an ideal breeding ground for stable flies due to the combination of food and moisture provided by the manure and wasted forage covering the soil. Entomologists at Kansas State University that have trapped flies emerging from winter feeding sites estimate more than 1 million stable flies can emerge from a single hay ring feeding site. That is right, 1 million flies per ring feeder when the wasted forage and manure is left in place and not cleaned and removed. The economic threshold for a reduction in weight gain for cattle is five stable flies per leg. Obviously, if winter feedings sites are not properly managed and cleaned in the spring, flies may be a nuisance for the summer grazing period resulting in reduced profitability.

### **Winter feeding site management recommendations:**

First, prevention of large accumulations of forage residue, manure and moisture at the feeding site is critical to prevent the above challenges. Practical recommendations include the following:

- Periodic movement of feeder location.
- Rolling hay out in different locations throughout the pasture.
- Avoid rolling out poor quality or rotted hay that will not be eaten.
- Grinding hay to help prevent sorting by the animal, which decreases waste.
- Avoid overfeeding, regardless of feeding method, to prevent trampling of hay which becomes stable fly habitat once mixed with manure.
- Feeding locations should have adequate drainage to prevent moisture accumulation surrounding the feeder. However, runoff from these sites should not enter open surface water.
- Place the temporary feeding sites at least 100 ft away from surface water. In most situations, this allows a vegetative buffer to be maintained between the feeding location and the water source. Vegetative buffers are extremely effective in reducing the nutrient and bacteria levels in runoff before entering surface water. Producers should evaluate their traditional feeding site location and determine how to reduce negative environmental impacts.

Secondly, if cattle must be fed in the same location throughout the feeding period, cleaning and removal of material is necessary. Fecal bacteria can live in the wasted hay and manure mixture for numerous months after the cattle are removed. The majority of bacteria and nutrient runoff and fly production occur in April, May and early June, thus feeding areas should be cleaned and waste disposed of before or during this time.

## **Everyone Needs a Nutrient Management Plan**

*By Joe Lally, Iowa State University*

I enjoy following baseball as a fan and working with farmers on nutrient management plans. Over the years, I've come to believe there are many similarities in the way the games are played on and off the field. First of all, consider the parallel terminology: scouts and agents (certified crop advisors, technical service providers); umpires (DNR, EPA); fans (consumers); major league baseball (commodity and farm organizations); owners (farmers). In fact, we know a lot of serious baseball fans in the farming community. They understand the game. Many played the game all their lives. Every once in awhile, flaws in the game arise and need immediate attention. Steroids are a good example in baseball. Manure in surface water is a similar example in farming. Both took years to transpire as a problem. The baseball industry solved their problem after much public input. Consumer fans are now making their desires for clean water and safe environments well known to farmers all across the country. Farmers can make a home run on their own farms and impress the fans with a proactive approach to water quality issues — implement a nutrient management plan (NMP). Larger farms have been required to implement nutrient management plans as part of permit processes. Medium and small farms need to step up to the plate, take one for the team, and get a plan in place. Operational integrity can be the core standard on livestock farms; nothing less is expected of an industry that supplies food locally and worldwide.

Nutrient management plans have been around a long time (our first plans in Iowa were prepared for farmers in 1990). The value of NMPs has been realized by those who have already developed and implemented them. They are really a scouting report of the farm. It outlines the competitive advantage the farm has through its implementation. What's the production capacity of the player? What are his historical numbers? Where did he play before and when? Those questions match up pretty well with how much manure was produced, what's the analysis, where'd you put it, and when? These are the core questions of an NMP and the heartbeat of what will improve management decisions.

### **Where do we stand?**

So, where do we stand today with the comparisons? Major League Baseball has a pretty good handle on the steroid issue and is moving onto the HGH issue. Farmers have some NMPs implemented on some fields. Many small and medium farms have yet to compile and implement their NMPs. It's up to the farming industry to encourage the benefits of NMPs. The farmers' fans expect it. The umpires are calling the fourth inning already. The agents are beginning to recommend it. The industry is preparing to assist with more programs and incentives to proactively move the industry forward.

At the end of the current baseball season, the player who has a successful year makes more money. Likewise, when nutrients are no longer finding their way to the creek, the farmer makes more money, and consumers express the confidence in the origin of their food with additional tickets to the game. As Hawk Harrelson, a popular Chicago White Sox broadcaster, routinely says during a big scoring inning, "don't stop now boys."

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