



Standards Oversight Council (SOC)

Supporting Technical Standards for Urban and Rural Soil and Water Conservation

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590 Nutrient Management Standard Team DRAFT MEETING NOTES

Wednesday, September 18, 2013 || 9:00am – 3:00pm

Attendees: Kevin Masarik, Pat Murphy, Tony Smith, Terry Kelly, Todd Schaumberg, John Koepke, Sue Porter, Sara Walling, Carrie Laboski, Paul Zimmerman, Laura Chern, Matt Zoschke

Welcome/Updates

NRCS has scheduled for Jorge Delgado to visit during the first week in December. He will be working with NRCS to calibrate the Nitrogen Leaching Tool that he created. By this time, NRCS would like the team to have recommended management practices that help manage the risk of N loss. These management practices will be incorporated into the tool.

There is concern that the “nutrient/nitrogen reduction” language/terminology may not be appropriate or is miscommunicated. Nutrient Efficiency strategy may be more accurate than Nutrient Reduction.

Useful Resources/Materials:

- Nov 20-21 – [North Central Soil Fertility Conference](#) in Des Moines, IA. Delgado will be speaking.
- Sep 30, 2pm – [Webinar for MN Nitrogen Reduction Planning Tool](#)
- [Iowa Nutrient Reduction Strategy](#), from Kevin – most pertinent: Section 2.1, page 6

N Management for Groundwater

The team continued with the N management discussion. NRCS charged the team with developing a framework of various BMPs to help mitigate N loss risk by December.

Quality Assurance Teams and manure haulers say that you have to allow some manure spreading in the fall. Dana Cook, a manure hauler with good equipment, can haul a minimum of 5000 gallons. Team will have to determine options for fall manure application, such as applying manure on alfalfa and cover crops. If there is >30% crop residue or vegetative cover on the soil surface, then growers are allowed to spread 5000-10000 gallons per acre on SWQMAs (*from Table 1 in WI 590*). There was a recommendation to convert the gallons per acre units to lbs of N per acre, given that the concentrations of N vary in different types of manure.

- Carrie will have her student normalize the data presented with the goal of 100lbs of available N. She will also work on converting the gallons per acre measurements to lbs of N per acre.
- Sue, Carrie, Andrew, Todd and Pat will expand Table 1 in WI 590 standard to include more options for fall application. They will further consider spreading on alfalfa, depending on the # of cuttings. Alfalfa needs 200 growing degree days for it to be established to take up N.

There was discussion about spreading manure on irrigated fields and highly permeable soils. The team proposed that in the fall, up to 7000 gallons of manure could be spread on alfalfa (plus others like established

cover crops, spring red clover under winter wheat) on highly permeable soils. The team began to evaluate the risk of spreading on different cover crops. They drafted revised language in Criteria B for spreading on fall-seeded, biennial or established crops, and need to further consider options for spreading manure on bare ground.

- Carrie, Todd, Sue, and Pat to finish drafting of this section of the standard.

Note about putting everything into the nutrient management plan. Maybe wellhead protection plan could be elsewhere. There is concern that the standard could be too complicated and dilutes the goal. Many communities have wellhead protection plans. We can compare these plans to 590.

- Laura will bring a diagram for community wells distinction. School, municipal, community wells are difficult to find. Laura will look into seeing if a map of WI wells is available.
- Matt will get an example of local wellhead protection plan.

Another question that came up: When a smaller section of a field is more sensitive to risk, how does the grower manage the whole field?

Soil Sampling Frequency

The team discussed whether the national standard requires this soil sampling frequency recommendation to be in A2809 or state code.

The team reviewed the purpose of the 590 standard

- The criteria in the 590 standard are intended to minimize nutrient entry into surface water, groundwater, and atmospheric resources while maintaining and improving the soil.

A2809 provides guidance for growers to achieve the most agronomic potential. The NRCS 590 standard provides guidance on management practices that minimize negative environmental impact and maintain soil health. Low-intensity or low-input farms may not pose environmental risk. From a water quality standpoint, it could be very low risk. There is concern that the proposed language is recommending poor agronomic management. Some farmers have different goals than achieving the highest yield potential.

Report backs from the community on this language suggest that it is too complex. Their main concern is that farmers are sampling during different parts of their rotation, when their nutrient availability and requirement for the upcoming crops are different.

Pat/Terry have enough information from the team on this topic to bring forth a recommendation at a later time. They would like more input from other counties to rework draft a proposal.

Manure Analysis - Ammonium N

The team needs more information to decide on including or excluding the requirement to test for Ammonium N in manure analysis. Testing Ammonium N will most likely be required in the future. Sufficient data is not yet available to include recommendations in A2809, although eventually it will happen. There is a strong suggestion to include manure sampling the tech note.

National standard requires testing of Ammonium N in manure analysis, and it does not indicate what a farmer should do with the information. Ammonium N is immediately available for conversion to Nitrate N in the

soil, which can easily be lost by leaching. Since the last 590 standard revision, farms are now producing a wider variety of manure types, liquid vs. solid manure. The higher the liquid content of the manure, the more ammonium N it will have.

There was conversation about the ammonium concentration level in manure that is stored for short periods of times versus manure stored for an entire year. Is the risk of N loss in spreading that manure different? Does a grower managing manure through daily haul have less risk than someone that has stored manure in a pit for a year. Growers sample/test manure concentrations right before field application. Getting good samples is a challenge, particularly samples of solid manure.

- Carrie will review data to determine if ammonium concentrations of manure changes with longer storage. Is the ammonium concentration drastically different in manure stored for one day versus one year?

The team would like to provide farmers with options for how they can use Ammonium N testing to better their farm practices. Recommendations for BMPs based on Ammonium N testing results could be listed in the Technical Note.

- Carrie was asked to develop a paragraph that offers guidance on what to do with test results.

Next meeting agenda items

- N management
- Manure analysis – Ammonium N

Team Process Evaluation

The team completed a brief evaluation of this team process so far to facilitate improvements in the future.

Action Items

- Gini will confirm Hancock is available for changed October meeting date.
- Carrie will have her student to normalize the data with the goal of 100lbs of available N. She will also work on converting the gallons per acre measurements to lbs of N per acre.
- Sue, Andrew, Carrie, Todd, Pat will convene before the next meeting to expand Table 1 of WI 590 standard with more field application options. This group will also finish a draft of Criteria B of the standard that the team began.
- Laura will bring a diagram that explains the designation of a community well. Laura will also determine if a map of WI wells exists.
- Matt to find and bring an example of a wellhead protection plan to the next meeting.
- Pat/Terry will request more input from other counties/stakeholders on revising the soil sampling frequency and bring another recommendation back to the group when they are ready.
- Carrie to review data to determine if ammonium concentration of manure changes with longer storage. Is the ammonium concentration drastically different in manure stored for one day versus one year?
- Carrie was asked to develop a paragraph that offers guidance on how farmers can use Ammonium N testing results.
- Gini will send out a [Doodle Poll](#) to schedule meetings through April 2014.
- Gini will at Paul Zimmerman to the 590 team google group.

Next Meetings:

Friday, Oct 18

Tuesday, Nov 12

Thursday, Dec 19