



Standards Oversight Council (SOC)

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590 Nutrient Management Standard Team

DRAFT MEETING NOTES

Wednesday May 20, 2015 || 9:00am – 3:00pm || Hancock Ag Research Station

Attendees: Sara Walling, Sue Porter, Terry Kelly, Andrew Craig, Matt Zoschke, Tony Smith, Todd Schaumberg, Carrie Laboski, Nikki Wagner, Pat Murphy, Laura Chern, John Koepke, Gini Knight.

Literature Review regarding Winter Manure Applications and Frozen Soil Conditions

The team discussed a UW Madison literature review of winter manure application. A majority of the published plot and field-scale research was conducted prior to 1980 and was testing solid-bedded dairy manure applications. After 1980, most of the research was in the form of large-scale case studies, testing liquid and solid manures, crop types, and tillage systems. Some of the points:

- Solid pack manure applied during the freezing season had an insulating effect and generated less runoff.
- There was a lot of variability in the results for nutrient loss.
- Liquid manure has a high thermal conductivity compared to solid-bedded manure because of its water content. Given the increased moisture, there is higher potential for increased runoff.
- Main factors contributing to runoff were the air temperature, moisture content of manure, and the amount of snow cover.

This student will begin a 3-year study starting in the winter of 2015 to advance the understanding of runoff and nutrient losses associated with winter manure application.

Review summarized comments from V.A.1.c.

Due to a number of comments requesting an exemption from the winter spreading plan, the team discussed if and when it may be appropriate for planners to not produce a Winter Spreading Plan, due to adequate available storage or no winter manure application. Overall, the national standard requires the WI standard users to produce a winter spreading plan and runoff risk assessment if they intend to spread manure in the winter. Producers need to create a plan for what they are going to spread or apply in the winter. If they do not develop a winter spreading plan according to the protocols, then they are not allowed to spread manure in the winter. The team acknowledged the difficulty in accurately defining or documenting available storage. The team also prefers for the winter spreading requirements to not distinguish between small and large farms, and more importantly to mitigate known risks. The team agreed that the Winter Spreading Plan should identify the number of acres needed to spread a minimum of 14 days of manure or all manure anticipated to be spread on frozen or snow-covered ground, whichever is greater.

The team also clarified that the Winter Runoff Risk Assessment is one component of the Winter Spreading Plan. This distinction needs to be clear in the standard language and will be adjusted.

Review comments and make revisions regarding Section V.A.2.c., prohibitions on frozen and snow-covered soils. The team reviewed the comments associated with this section. A summary of the comments with responses below are as follows:

- **Support of revisions.**
- **Implement a procedure for identifying local features of concern.** Desire for consistency.
 - The team understands the concern with consistently identifying these features, and that this is a bigger problem than what the 590 standard and standard revision team can address. This section allows some flexibility for implementation at the local level. It also allows for additional planning and uses a formal process for recognizing emerging issues. The inclusion of this section avoids statewide rules.
 - The team did remove the second bullet in this section, because the intent is captured in earlier language of the standard, and addressed as year-round restrictions, not just in winter months.
 - The main local resource concerns identified in the past are karst land forms. This version of the standard further recognizes the risk of these features with the 5' to bedrock restriction, and therefore begins to address this high risk area.
- **Change LCC or LCD.**
 - LCCs create Land & Water Plans through a formal, recognized process, where resource concerns can be identified. No change.
- **Change P rate language.** Suggest “do not exceed the P removal of highest P demanding crop in the rotation” or “limit applications to no more than 60 lbs of P2O5”.
 - No change. The proposed rate is not an environmental consideration. The limit was not meant for the full rotation, just specific time, and allows flexibility for planners.
- **Grazing on all slopes?** Suggestion: Grazing may occur on all slopes provided permanent vegetation is maintained so as to prevent rill and gully development.
 - Grazing should refer to “gleaning or pasturing” referenced earlier in the standard, which is defined as having maintained vegetative cover. The standard language was changed to substitute “grazing” for “gleaning or pasturing”.
- **Maps.** Will maps of DNR Well Compensation fund sites be provided?
 - Yes, maps of these sites are currently available on the DATCP manure management website.
- **Identification of SD soils.**
 - This information is provided on detailed soil maps, now available on the DATCP website.
- **Increase restrictions.**
 - The team discussed greater restrictions suggested at great length, and the current language will remain the same. The current language addresses the greatest risk areas and further protects groundwater as compared to the 2005 version of the 590 standard.

In summary, section V.A.2.c., the prohibitions for spreading on frozen and snow-covered ground, was revised slightly based on the comments received:

- Deleting bullet 2, regarding locally identified areas, as it is addressed earlier.
- Substituting gleaning/pasturing for ‘grazing’ in bullet 4, regarding slopes.

The other prohibitions remain unchanged.

Plans & Specs – Winter Runoff Risk Assessment

The team discussed bigger concepts in revising the Winter Runoff Risk Assessment, particularly in relation to a majority of comments suggesting simplification and an automated process. To reduce complexity, a more simplified list of prohibitions could replace the site-specific planning process released in the Tech Note.

Points of discussion include:

- A majority of the reviewers believe the current process is too complicated and cumbersome. They prefer a more simplified version of this assessment, and recommend an electronic alternative.
- Using the Acute PI and the Winter Runoff Risk Estimate in SnapPlus could be an option, but the program developers and team have concerns about the program providing the comprehensive results desired for this risk assessment. SnapPlus was not originally designed for this task, but is convenient for planners if the data is already imported. There is concern about the program being required to do something that it was not designed to accomplish.
- The main factors influencing the winter runoff risk estimate, which are slope and surface roughness, which are important but do not provide a complete assessment of the risk.
- The team discussed the main factors that influence increased runoff risk are slopes, proximity to concentrated flow channels and direct conduits to ground water and surface waters, as well as the overall density of manure spread within a given area/watershed.
- It was noted that there are additional protections to ground water and surface waters in this version of the standard already outside of winter spreading. Those additional restrictions will protect runoff from occurring in the winter months as well.
- NRCS is still very clear in its need to ensure protection of groundwater and surface waters to justify cost sharing.
- The team discussed the listed mitigation practices and the need to be confident in the impact those practices will have in reducing risk. Some practices were removed or combined.

The team reviewed the two options for a revised Winter Spreading Plan. One option was more simplified, listed prohibitions, Runoff Risk Assessment in SnapPlus to evaluate field risk, and mitigation options. It also included all preferred components of the Winter Spreading Plan in the standard and not in the Tech Note. This option was more clear and potentially more restrictive to some producers. The other option used a table format with fields, risk areas/features, and mitigations if growers chose to spread manure on the risk areas. The team appreciated the simplicity of the first and also agreed that farmers would prefer more flexibility and options even if it meant more work. The next steps will be to generate a plan that lists prohibitions and mitigations to those prohibitions if farmers wanted to spread manure within those prohibited areas.

Action Items

- Pat will draft a revised Winter Runoff Risk Assessment based on team discussion. A draft will be sent out in advance for the team to review and provide comment.
- Gini will look into italicizing all definitions throughout the standard, instead of just the first time that term appears.
- Gini will draft responses to the comments based on the team discussion.

Next Meeting – June 17. Draft agenda items.

- Revisit Winter Spreading Plan options (two hour limit)
- Clarify comments on section V.A.1.g, h, & m.

- Review comments from the rest of Criteria A, and Criteria B, N management

Timeline

- Jun 17 – Winter Spreading, Criteria A & B
- Jul 23 – Review comments, focus on the rest of standard.
- **2nd Broad Review time frame:** July 31 – August 31
- Sep 9