



Standards Oversight Council (SOC)

Developing effective technical standards that protect Wisconsin's natural resources

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NRCS 590 Nutrient Management Standard Team

MEETING NOTES

Thursday, May 23, 2024 ▲ 9:00am – 2:30pm ▲

Juneau County Services Building, 200 S. Hickory Street, Mauston, WI 53948 ▲ Room 209 ▲

Agenda-In-Brief:

9:00 Welcome (Kate, Team)
9:05 Notes Review (Kate, Team)
9:15 Nutrient Loss to Groundwater (Dan, Andrea, Kyle, Andrew, Mike)
Break as needed
12:00 Lunch, provided
12:30 Setbacks (Mike, Morgan, Aaron)
Break as needed
1:30 Winter Spreading (Aaron)
2:15 Meeting Review (Kate)
2:30 End

9:00 Welcome (Kate, Team)

Goal: Attendance and review the meeting objective.

Attendance: Kate Brunner, Mike Stanek, Daniel Smith, Aaron O'Rourke, Andrew Craig, Travis Engels, Andrea Topper, Carl Hahn, Sara Walling, Morgan Kepler, Matt Ruark, Eric Hurley

Absent: Cody Calkins, Kyle Much

Guests: Ted Hoffman

9:05 Notes Review (Kate, Team)

Goal: Brief Action Item reports and approve 4/25/24 meeting notes.

Draft notes from the 4/25 meeting were emailed to the team. Some open action items—a few topics will be discussed in-meeting today and some Kate will continue to track as longer term items. Action items that will be carried forward:

- **Andrea** will reach out to a colleague at DATCP to see about a soils query of CAFO W soils compared with 590 W layer **Cody** has maps from previous 590 team and can also create updated map. Team will evaluate this information to see the implications for changing from 12" to 24" to apparent water table. Cody could not attend today so this will be reviewed at the next meeting.
- **Andrew** will share the TMDL modeling information with the Team via email, and could also present at a later meeting on options to use this with the standard. DNR has TMDL modeling that evaluated fertilizer application and P specific to a watershed. Rather than create a new P Index to apply across the state, standard could piggy back on the TMDL

modelling for more specific P related criteria. This is expected to be a longer discussion; Andrew will share the information for a later meeting.

- Longer term: **Matt** will look into the data for N and irrigation more and see if he can identify some threshold for when the crediting makes sense, for both potatoes and non-potatoes.

No questions or further updates on the April meeting notes, so Kate will finalize and post online.

9:15 Nutrient Loss to Groundwater (Dan, Andrea, Kyle, Andrew, Mike)

Goal: Review and agree to additional recommended changes to Criteria to Minimize Entry of Nutrients to GW. This breakout group revised the Nutrients to Groundwater section further after discussions at the last meeting. Team discusses and revises the additional recommendations:

- a. Confirm tool(s) to reference for the high-risk categories
 - i. The WDNR Nitrogen Restriction Area Map Viewer is good for some information though not maintained and not including both public and private well data. It will be referenced as a possible resource, though not sole source. **Andrew** will send language for Dan to use regarding high risk areas and resources.
 - ii. Team discusses nitrate concentrations used in high risk definitions and option to prohibit spreading at some maximum level. Standards are for mitigation but not absolute prevention so note in the scope of this standard. Preventing spreading puts producers out of business.
 - iii. Kevin Masarik has consolidated existing data and UW Stevens Point lab is analyzing new private well samples all the time.
 - iv. **Morgan** will reach out to Kevin Masarik to find out if UWSP data could be an additional resource that is updated.
- b. Ksat as part of P soil definition – on hold, Mike reviewing information with NRCS soils staff (Mike England)
- c. 12 in. vs 24 in. to apparent water table – on hold, Cody mapping
- d. Number of days forecast <50 degrees – team discusses options for using air temperature and soil temperature. There isn't specific research but Dan mentions his experience.
- e. Table summarizing conditions for application when soil <50 degrees
 - i. Team developed a table to communicate the late summer/fall applications to include temperature (soil and air), dry matter content, maximum application rate, and crop requirements at the time of application.
 - ii. Remaining questions:
 1. Should standard specify depth for soil temperature criteria and if so, what depth?
 2. How many days would forecast be above 50 degrees? **Dan** will look at data more closely to see if there is information to help answer this question.

The approach discussed by the team would be tied to use of other mitigating practices like what's in the IA guidance document Reducing Nutrient Loss: Science Shows What Works. NRCS plans to create a Wisconsin specific guidance document like this that would be

referenced in the standard to provide charts of combinations of management practices, land use practices and edge of field practices. **Kate** will start a WI draft and share file with the team for later discussion and adjustments.

Break as needed**12:00 Lunch, provided****12:30 Setbacks (Mike, Morgan, Aaron)**

Goal: Review recommendations from breakout group work on changes to the current standard language related to setbacks. Get team input and agreement on modifications.

- Considered: mandatory tillage, SWQMA, intermittent streams, confirm sources of current setbacks, and setbacks used in other states
- Tile Inlets
- Intermittent Streams, Waterways, Concentrated Flow Channels, Perennial Streams, Wetlands, Lakes
- Wells
- Conduits to GW (not just Silurian Karst)

There was an action item from the last meeting for **Mike, Morgan and Aaron** to look at the setbacks and recommend revisions for team to consider. They provide some recommendations and options (see PowerPoint) and team discusses:

- Team isn't sure if current setbacks are based on science/research. Previous 2015 standard had a lot of comments on setbacks and those previous comments and responses indicated it was more of a negotiation.
- There was specific concern about differences between CAFOs (NR 243.03(66)) and other farms. The Team likes the idea of consistency but CAFOs and the Silurian dolomite performance standard restrictions only regulate manure.
- Prior to meeting, Andrew emailed the team information about DNR's source water protection areas and well resource mapping in the [Surface Water Data Viewer](#). Team discussed matching 590 with these DNR distances. The distances are DNR's determination of the best available estimate of the "5-year groundwater time-of-travel zone". Team discusses changing setbacks from 1,000' to 1,200' for municipal wells and 100' to 200' for transient non-community well.
 - Adding 200' radius for municipal wells would be additional 32 acres.
 - The distances are not consistent with those in CAFO program.
 - 1000' is already part of the N restricted soils
- Surface water quality management areas (SWQMAs) differ from 590 in that 243 includes intermittent streams (part of waters of the state) and conduits to water. In current standard, 590 farms can spread up to the edge of a stream. Always a 25' buffer if injecting/incorporating, 100' if surface applying.
- MAPP and DAPP can be applied if needed but there's management (like veg buffer, est. cover crop, incorporate, etc.).
- When CAFOs apply manure in SWQMAs they are required to select 1 of 5 strategies based on which application method they select. Team wants to use setbacks in NR 243 in the

updated 590 standard. SnapPlus is already set up with programming for NR 243 definitions so resources already exist for implementation.

- Team still to confirm: whether/how to include commercial fertilizer in setbacks, or only manure to match NR243.
- **Travis** will share with the Team a chart he has of 590 setbacks, and could add CAFO requirements in.

Break as needed**1:30 Winter Spreading (Aaron)**

Goal: Review winter spreading in current 590 standard compared to CAFO program. Identify areas to review further and develop breakout group to perform work.

After the last meeting Andrew supplied the comparison table of 590 standard to NR243 nutrient management requirements. Aaron summarizes in a presentation and Team discusses areas that could use update:

- Team agrees the current criteria could use some clarity and focus on what's really needed.
- Team members share concerns with winter spreading in the current standard, both details to maintain and areas that could use adjustment.
- A new breakout group of this Team will discuss and provide recommendations for changes to winter spreading at the June team meeting. **Mike, Morgan, Andrea, Dan** will look at:
 - Use current 590 and CAFO rule as starting point
 - Look at adjacent state's approaches
 - Consider increasing rates, headland stacking, composting, slopes (esp. liquid manure).
 - Consider how winter spreading impacts both small and large farms.

2:15 Meeting Review (Kate)

Goal: Review Action Items and prepare for the next meeting.

Next meeting is June 27. Location not set yet but looking at going back to Portage. Topics for the agenda for June or beyond include:

1. Iowa management practices guidance doc – get team input on how to incorporate this guidance doc into the standard and what edits needed.
2. Wells and geology – could include presentation by Madeline Gotkowitz
3. Possibly more on setbacks?
 - a. Better define Conduits to GW (not just Silurian Karst)
 - b. Well comp areas
4. Winter spreading – Mike, Morgan, Andrea, Dan will meet before the next meeting and provide the rest of Team recommendations for changes.

ACTION ITEMS

- Carried forward from previous meeting:
 - **Cody** will prepare maps comparing different depths to water (like CAFO W soils and 590 W soils). Team will evaluate this information to see the implications for changing from 12" to 24" to apparent water table.

- **Mike** reviewing information on using Ksat in P soil definition, including input from NRCS state soils staff.
- **Andrew** will share the TMDL modeling information with the Team via email, and could also present at a later meeting on options to use this with the standard. DNR has TMDL modeling that evaluated fertilizer application and P specific to a watershed. Rather than create a new P Index to apply across the state, standard could piggy back on the TMDL modelling for more specific P related criteria. This is expected to be a longer discussion; Andrew will share the information for a later meeting.
- **Matt** will look into the data for N and irrigation water more closely and see if he can identify some threshold for when the crediting makes sense, for both potatoes and non-potatoes.
- **Andrew** will send language for Dan to use regarding high risk areas and resources.
- **Morgan** will reach out to Kevin Masarik to find out if UWSP nitrate data could be an ongoing resource.
- **Dan** will look at temperature in soil data more closely to see if there is information to help identify the number of days above 50 would reliably warm the soil.
- **Mike, Morgan, Andrea, and Dan** will meet before the next meeting to review winter spreading and provide the rest of Team recommendations for changes at the June meeting.
- **Kate** will publish final April meeting notes.
- **Kate and Mike** will develop agenda for next meeting and send it to team along with any reading materials one week prior.

2:30 End