



Standards Oversight Council (SOC)

Developing effective technical standards that protect Wisconsin's natural resources

121 S. Pinckney Street #420, Madison, Wisconsin 53703
(608) 441-2677 || socwisconsin.org

NRCS 590 Nutrient Management Standard Team

MEETING NOTES

Thursday, September 28, 2023 ▲ 9:00am – 2:30pm ▲

NRCS, 2912 Red Fox Run, Portage, WI 53901 ▲ FSA Conference Room ▲

SCHEDULE IN BRIEF

9:00 Welcome (Kate, Team)

9:30 Refine List of Issues and Challenges (Kate, Team)

Break as needed

10:15 Discuss Criteria for New Purposes (Mike)

12:00 *Lunch*

12:30 Phosphorus Management Issues (Mike)

1:30 *Break*

2:00 Plan of Action (Kate, Mike)

2:20 Review (Kate)

2:30 *End*

9:00 Welcome (Kate, Team)

Goal: Attendance and review the meeting objective.

Attendance:	Kate Brunner	WI Land+Water
	Eric Hurley	NRCS
	Mike Stanek	NRCS
	Andrea Topper	DATCP
	Andrew Craig	DNR
	Aaron O'Rourke	DNR
	Travis Engels	Kewaunee Co. LWCD
	Morgan Kepler	Marquette Co LWCD
	Daniel Smith	UW-Madison
	Matt Ruark	UW-Madison
	Carl Hahn	Insight FS
	Kyle Much	Much Crop Consulting Inc.
	Sara Walling	Clean Wisconsin

Absent: Cody Calkins

Guests: None

Draft meeting notes from the 8/24 meeting were emailed around to the team. No open action items. No comments or questions on the notes; Kate will finalize and post online for public.

Other state's examples the team reviewed were based on the NEW national standard.

Guidance Documents (formerly known as Technical Notes) will be updated along with this standard, typically after the standard or near the end.

- Cranberries in particular are a different type of crop, though other specialty crops may be lumped together. Cranberry Tech Note will remain, with edits. Paper forms can be removed but NRCS will have Excel sheets available.
- Team will keep these specialty crops in mind as they see NMPs come in and as the standard is edited.
- Mint may be another category to have a new technical note. If mint is a new tech note, Morgan has a farmer that grows mint and is on a national board for mint growers and she can get contacts as needed.
- A subgroup of the team would eventually identify issues (like commercial fertilizers and soil loss) with specialty crops and update/prepare Guidance Documents and present them back to the team. Specialty crops include things like cranberries, mint, potatoes, pumpkins, hops, etc.
- Does team get into the nitty gritty details with A2809? Standard sets criteria to meet the resource concern and anything crop-specific would be a technical note. Some of these crop specific details are not part of A2809 but there may be UW research on this (e.g., Amaya Atucha for fruits).
- Technical Notes would be addressed by this team, at the later stage of the process after the standard edits are farther along. Standard will be more general and Technical Notes will provide technical details.

9:30 Refine List of Issues and Challenges (Kate, Team)

Goal: Review list of issues developed at the last meeting and categorize for future discussions.

At the last meeting the Team started a list of issues with the current standard to guide future meetings. Kate emailed the Team this list for further input. Team reviews the list of key issues from last meeting and discusses adjustments.

Adaptive nutrient management is being pursued by some producers - some examples discussed for sweet corn and beans. N use efficiency as a proxy for water quality; doesn't include tissue sampling. NRCS has a pilot study as well. The UW Nitrogen Optimization Pilot Program (NOPP) data being collected is not necessarily following the NRCS Tech Note. It's around 25-27 projects of mostly corn, some cranberry, winter forage, grazing.

MRTN

- MN uses a MRTN strategy with recommendations by region (5 regions generally grouping soil types and climate, drawn over county boundaries). MN application recommendations are higher than WI (see 2023 PDF), though may be including starter allowances. Are farmers more willing to implement it in MN? **Mike** will reach out to MN state agronomist for insight into how implementation is working for them.
- WI may have looked into this when considering the nitrate targeted performance standard? **Aaron and Andrew** will look into whether the DNR TAC looked at things like N application rate and regional differences.

- 590 puts extra restrictions on MRTN application. MRTN hits the soil type restriction in WI, esp. in SW WI.

Future planning: Team discusses seeking further input from others outside the SOC team to help clarify specific issues with the standard.

Team discusses other N recommendations to possibly investigate and incorporate: Snap Plus has some N management though could be improved. Laura Ward Good will be presenting at a meeting in January. NRCS is working with NRCS to start some research on a nitrogen management tool. Discovery Farms research on N leaching is still early. UW has looked at nitrogen models and creating a simplified N budget tool though no outcome yet.

10:15 Discuss Criteria for New Purposes (Mike)

Goal: Review the new 590 purposes in the [2019 National Handbook of Conservation Practices](#) and identify criteria specific to the new purposes.

The 2019 NHCP version contains new, more concise purposes to include language on particulate matter and ozone precursors. Team discusses options to align the existing WI criteria or rewriting, decides to wait until the purpose can be reviewed in conjunction with the criteria tied to these purposes.

Break as needed

12:00 Lunch, provided

12:30 Phosphorus Management Issues (Mike)

Goal: Discuss issues with current standard related to phosphorus management.

Team begins discussing phosphorous management issues:

- Current 590 has additional criteria for P Management using either the P Index or soil test P. PI of 6 is approximately 6 lbs P₂O₄ per acre per year. PI model has challenges. It includes critical soil type (rather than predominant) so it overestimates the entire field is the steepest slope. PI includes distance to perennial surface water, though this application short circuits the PI if there's a concentrated flow path. PI also includes average rainfall, not the bigger storms.
- Summary—there's a balance of factors in calculating PI but a PI of 6 is too high to meet TMDLs. Laura Ward Good and Kevin Kirsch at DNR can explain this.
- Nutrient management planning hasn't always resulted in lower Ps.
- The concentrations for available P applications were to match 243.
- Ruark has written about converting different types of P analyses (Bray and Mehlich). **Matt** will email Kate the paper to share with the team.
- Laura Ward Good will join this team at the January meeting to present on the P Index. Mike is coordinating.
- One option is to put more value on soil test P, or even drop PI as an option. For example, allow 16-20 ppm on loamy soils for all crops except truck crops (31-35 ppm) and potatoes (100 ppm)—use optimum range in A2809. If the soil test goes over optimum levels, then no spreading.

- For potatoes, PI isn't a concern because majority are on sandy soils where it goes straight down.
- Right now, Team sees that nearly all potato fields and CAFOs use PI. If using soil test P, they wouldn't be able to spread or need a lot more land to spread it. NR151 says a PI of 6 (or 12 annually) so if 590 wanted to change PI number, then rule would also need to change.
- Rather than either/or P Index or soil test P, what about drawing clearer definition on when soil test is needed.
- Any change to P approach will be considered carefully, and Team wants to look at more data and options. Team will also need to look at other implications, like winter spreading.

1:30 Break**2:00 Plan of Action (Kate, Mike)**

Goal: Identify topics, goals, and guest speakers for next few meetings.

Next steps are to research and refine some more specific topics identified by the team (things like N, MRTN, precision ag, etc.), including looking at other states work, and bring back to future meeting.

Lab sampling procedures for manure – recommendations for when and how and how frequently to sample (SnapPlus v3 will do this?) **Dan** has info on this and he'll email the recommendations for Team to review.

Mike will work with Joel Peterson at UW-River Falls on a presentation at Oct. 26 meeting on manure characteristics and variability, existing lab sample data vs book value. Team will need to decide--how bad is over application and underapplication? This will be liquid manure focused as where the variability is greater. Mike will see if Joel has solid data, though there may be additional step to learn/decide details about solids.

Laura Good (P Index and SnapPlus) at Jan 25, 2024 meeting. **Mike** is coordinating.

Mike, Andrew and possibly others small breakout group will speak to Kevin Kirsh about TMDLs between Jan and Feb meetings, then report to team at Feb 22, 2024 meeting.

2:20 Review (Kate)

Goal: Reiterate topics for the next meeting and review Action Items.

Next meeting date is Oct 26 in person. Kate will let team know location, trying for something in Portage with a little more space.

Action Items developed today:

1. **Kate** will send this Team information on upcoming Technical Tour in Kewaunee County.
2. **Kate** will find meeting locations for future meetings and add to calendar entries. No Dec. meeting due to holidays.
3. **Mike** will reach out to MN state agronomist for insight into how regional implementation is working for them.
4. **Kate** will update Team website with resources from Team:

- a. **Matt** will email Kate a paper on converting different types of P analyses (Bray and Mehlich).
 - b. **Dan** will email info on manure sampling and lab analysis.
- 5. **Aaron** and **Andrew** will look into whether the DNR TAC considered things like N application rate and regional differences. They will summarize for the Team at Oct. 26 meeting.
- 6. **Mike and Matt** will work with Joel Peterson at UW-River Falls to develop presentation for Oct 26 team meeting on manure characteristics and variability (existing lab sample data vs book value for different manure types). This will be liquid manure focused as where the variability is greater, though Mike will also see if Joel has data on solid manure.
- 7. **Mike** will coordinate with Laura Good to present at Jan 25, 2024 meeting.
- 8. **Kate** will prepare draft meeting notes then reviewed by full **Team**.
- 9. **Kate and Mike** will prepare agenda for October 26. Kate will send to the full team 1 week in advance.

2:30 End