



Standards Oversight Council (SOC)

Developing effective technical standards that protect Wisconsin's natural resources

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WDNR XXXX Urban Soil Health Standard Team

MEETING AGENDA

Monday 09 February 2026 ▲ 10:00am – 3:00pm ▲

Pewaukee Public Library - 210 Main Street Pewaukee, WI

10:00 Brief welcome & overview (Pete, Christina & Carl)

Attendance: Christina Rauh, Neal O'Riley, Mark Polega, Doug Soldat, Pete Wood, Stu Schwartz, Andy Kaminski, Phil Gaebler,

Absent: Jamie Patton, Rafael Gonzalez Pagan

10:10 Revisit unsettled topics from last meeting (include break if needed)

In no particular order:

- **Vegetation** (Carl)
- **Slope infiltration** (Neal)
- **Credit system** (Pete)
- **(Added construction tech standard follow-up with Green Tier to the follow-up discussion;**
Christina & Phil)
- **(Added shallow dressing; Doug)**

Notes:

- **Vegetation:**
 - Functional traits are more important than turf vs native warm season grasses
 - Needs to be an expectation that a vegetative planting plan needs to follow decompaction
 - Potentially an appendix to point to 'choose your own adventure' type approach to plantings
 - Turf (specifying which species are better than others; and maintenance expectations)
 - Natives (specifying which species are better than others; and maintenance expectations)
 - Homework: vegetation language
- **Slope infiltration**
 - Fox et al (1997) article points to a cutoff between 5-10% slope angle (some established guidance is 20%)
 - Proposing 10% slope cut off
 - Carp C has 12% as their cutoff for steep slopes – Phil suggested 12% as the cutoff
 - What is the backing for 12%?
 - Should this be a cut-off or a gradient approach to crediting (i.e. you can apply these practices on any slope, but you'll only get credit for estimated infiltration – or measured?)

- A combination of bulk density, soil texture, and slope was investigated (Morbideili et al, Water, 2019)
- Check for consistency with WinSlam
- Example from Madison with a space with ranging slope – how best to handle the diversity in a landscape
- Circle back to discuss slope length
 - Will need some language to describe cut-offs
 - Needs to be compatible with sediment erosion control
 - Will need additional discussion next time – Pete
- Construction approach
 - Could be more of a single standard focused on decompaction of urban soils (whether post-construction or green space)
 - Green Tier folks suggested continuing to include this application of the standard
- Credit system
 - Based on comparison of fluffy top-soil on top 10% compacted bulk density soil profile, versus 20-inch ripped soil (with fluffy top-soil?)
 - This process repeated across soil types gives an estimate of curve numbers, and difference in curve number based on ripping approach.
 - What is the best approach here?
 - Suggestion - use current table and get feedback from broader audience
 - Problem proposed where planners/designers may not engage with the standard based on perceived lack of benefit, or credit.
 - Approach to tables based on a series of events (1-year, 2-inch, etc.)
 - Binned by regions of the state
 - Pollutant credit based on amount water infiltrated is included as well
 - Tables have a lot of benefits, but potential trickle-down ramifications into accompanying models is hard to grasp.
 - Follow-ups with Voorhees and others
 - Generally, concepts fit, but need further tire-kicking
- Shallow-dressing
 - Revisiting: Based on comparison of fluffy top-soil on top 10% compacted bulk density soil profile, versus 20-inch ripped soil (with fluffy top-soil?)
 - Shared slides show the pivot to increased runoff events, decreased groundwater recharge based on 10% increase in bulk density/compaction (Stu's work)
 - Suggestion that top-dressing approach may be inadequate to handle infiltration challenges
 - Comparison to fully compacted is the third scenario that could be included to show that the compost addition, without decompaction, is actually the 'middle' scenario, not the 'low' or 'poor' scenario.
 - Suggestion that approach needs to be decompaction + compost + vegetation plan
 - Do we want to have options for combinations of:
 - Vegetation plan
 - Ripping (decompaction)
 - Top dressing (compost)
 - ... and have the credit scaled to the anticipated benefit?

- Who would be the user that would go with a middle approach (top dressing)?
 - It's likely that this would only be home owners, but home owners aren't really the target audience of this standard.
- Pin in conversation @ homeowner situation – how to approach this aspect of the problem.

12:00 Lunch

12:30 Line reading of existing standard (Pete)

Finishing up discussion from before lunch – homeowner question

- Could be a homeowner via a municipality – i.e. the Madison scenario where a stormwater utility discount is available
- Rain garden tech standard is a possible template

Notes (line reading):

- Conditions where practices apply:
 - Mapped 100-year flood plain exclusion (as per previous conversation)
 - Decision to include drainageways
- Site Selection
 - 24 inch to seasonal high ground water – is this acceptable to folks?
 - Benefit is that it's consistent with national engineering guidelines
 - 5 & 6 - "minimal" may need defining (glossary)
- Compaction evaluation
 - Grid pattern could be infiltration instead of penetration as well – or it could be an 'either or' approach (either penetrometer grid, or penetration test grid)
 - Infiltration could take a number of approaches
 - Thinking through the process:
 1. Site Evaluation (is this a good candidate?; could also add a 'preliminary' site evaluation as a consideration)
 2. Submission material
 - a. (cost minimization is a consideration)
 3. Lots of discussion – difficulty coming to a concise set of parameters to test
 - Decision to re-write section to a more open ended requirement to prove or make the case that the piece of land is indeed experiencing a compaction issue.
- Soil Evaluation
 - What is the soil evaluation process?
 - Language adjustment for sampling quantity description (2 for first ½-acre, 1 more for each additional ½-acre).
 - Who will use this?
 - Cost for a municipality to take soil cores and determine bulk density for 4 samples might already be approaching cost-benefit incompatibility.
 - For a developer, bumping up soil classification so that curve number is in the 80s, and decompaction will move it to the 60s will be monetarily motivating enough to influence practice implementation.
- New Development soil evaluation
 - Could be assumed to be compacted
 -

1:30 Break (15 min)

1:45: Continuation of earlier topics / TBD

Notes: Break skipped – see above notes.

2:45 Next steps & action items (15 min)

Homework:

Stu - curve number and spreadsheet

Christina, Pete, Carl - language, re-writes in the draft

Neal - engage with soil investigation-type company, references to justify 10% slope & investigate slope length question

Phil - work with Stu on practical implications/applications of curve number changes

Zoom connection info:

Join Zoom Meeting

<https://us02web.zoom.us/j/83897688109?pwd=r7isXDtU5Wbfq83fY0sIS88lgobhJu.1>

Meeting ID: 838 9768 8109

Passcode: 072287