



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

Thursday 15 January 2026 ▲ 9:00am – 2:30pm ▲

WDNR, 3911 Fish Hatchery Road, Glacier's Edge Room, Fitchburg, WI

9:00 Brief welcome & overview (Pete, Christina & Carl; 10 min)

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

Guests: Meg Sargent (UW-Extension), Martin Ventura (UW-extension), Nicole Kirk (Golden Sands & NRCS)

Team members absent: Jamie Patton

9:15 Review and discuss criteria for rehabilitating existing urban green spaces (75 min)

Notes: See side document – “Eligibility for Existing Pervious Areas.docx”

- Will there be a minimum or maximum area where this practice could be applied? Economy of scale will likely apply (diminishing returns below a certain threshold)
- Glossary could be used to designate 'minimal traffic' or 'minimal foot traffic'
 - Tech standard 1100 uses 10 or more users per acre per week to define 'high traffic' turfgrass areas.
 - Neal - 1002 also includes criteria that could be referenced
 - NRCS tech standards – vehicle access roads, and foot traffic/trails
- Slope - Should there be a cutoff? Yes. But where to draw the line. 20% seems like a reasonable starting point, but ideally we'd have a better technical basis.
 - With step 1 being a desktop screening exercise,
 - Neal will look into NRCS slope infiltration research and share with the team
- Source area control versus capture of runoff from an area – this is a unique standard in that it's focused on the source area. [REVISIT 10% figure – is this a good threshold]
 - Green roof guidance document could be a good reference - Phil Gaebler will share with this document with the group
- How to handle floodplain status?
 - Decision to exclude floodplain – 100 year floodplain as criteria
- Wetlands could be excluded as well – these excluded areas could be included in the 'areas where this practice cannot be applied' section
- Utilities threshold – which utilities? All. 10% could be removed.
 - Utility could be added to glossary (what's included, how to determine utility conflicts)
- A screening component could be added from discussion with the owner/operator.
- A step 0 could be added (not screening criteria, but initial laying of groundwork):

- Interview
- Reviewing photos
- Could be in considerations as well
- Depth to groundwater could be part of an initial screening?
- Step 2: compact evaluation criteria
 - Plant roots section – Mark Polega volunteered to investigate existing parameters from IFSHA and see how best to adjust for urban setting (plant characteristics, plant roots, plant community, aboveground characteristics)

10:30 Break (15 min)

10:45 Vegetative restoration criteria (75 min)

Continuation of discussion on “eligibility criteria”

Notes:

- Step 3 Determine potential effectiveness of respiration based on soil conditions
 - Procedure was developed to establish a curve number based on soil texture in order to designate appropriate infiltration credit
 - Table will be incorporated for discussion
 - Revisit this section once we’ve discussed what the credit system would look like
 - How does this fit within MS4 – WinSLAM bins soils into three large groups (lacks needed specificity)
- Post construction discussion
 - Decision making associated with whether to undergo urban soil health process or increase the size of a retention pond –
 - Tipping point
 - How do we determine the depth of restoration needed to match the previously existing soil group?
 - Current construction practices don’t match neglected agricultural soils –
 - From a contractor perspective, bare minimum is likely the most that can be expected
 - Currently, the construction sector is not pursuing for or asking for this standard and associated credit – therefore we can craft the standard to avoid the potential for meeting a bare minimum, avoiding loopholes.
 - Development track process is not yet fleshed out – could be material for next time [initially discussed, but shelved for the time being following the afternoon’s discussion]
- **“Vegetative Restoration criteria” topic**
 - Background - native vegetation is preferable for promoting infiltration
 - What are potential criteria?
 - Could native vegetation provide a bonus to infiltration credit?
 - Stepwise process –
 - 1. Decompaction
 - 2. How do you now create living soil to help maintain itself?
 - Is chemistry (road salt, etc.) something to be considered within this
 - Native plants (prairie) can be used as a tool to promote decompaction
 - A maintenance criteria is needed (more challenging to establish than turf)

- Is there a pathway that we should account for that involves pivoting from turf to natives without decompaction process (suburban subsoiling – deep-ripping and compost addition)?
 - Tiered approaches
 - For 100% – full decompaction and natives plantings
 - For X% (50%?) – full decompaction and turf
 - For X% (25%?) – no decompaction and natives
 - [specifics would need to be ironed out – is there scientific research to help inform where to set these thresholds]
- NRCS rangeland data?
 - Unsure, but probably as there are standards
 - NRCS has a agronomy guidance doc for informing establishment of native plantings (unsure what data went into the backing)
 - Any infiltration data?
 - Shared data on rain garden performance with natives versus turf
- Research question – decompaction with prairie plants in urban soils versus non-urban (ag?) soils.
- Park example provided by Phil Gaebler – turf and native plantings strategically/thoughtfully placed to gain hydrological benefit from natives (no compaction as kids aren't running around in the native areas), while allowing sport field compaction in the turfgrass planted areas.
- Follow-up research question – compaction and infiltration benefit of natives versus turf in urban areas? (Wepking; et al, homework!)

12:00 Lunch (45 min; Pasture & Plenty)

12:45 Continuation of earlier topics / TBD (75 min)

Decision to explore development criteria

Notes:

- If you're going to use this tech standard for a new development, what is the process?
- Planning description
- Phil Gaebler has an example – currently ongoing construction project which is expected to negatively impact soil compaction (through standard construction stripping and grading).
 - For a subdivision (such as this example) are individual home-sites worth pursuing or just large green spaces?
 - In this instance – between lots have a 10' drainage way & small yards
 - Target stay-on requirement (for water management) is the first filter
 - If you can't meet target stay-on, groundwater recharge needs to be calculated (using RECARGA model) – assumptions within this model lean towards favorability of yard and drainage way soil health interventions.
 - One possible lever could be to allow for a modeled soil class to be designated as more favorable IF a site goes through a decompaction process
- Can WinSLAM model be adjusted to more accurately reflect compaction in construction-effected sites? Thus a benefit could be better attributed to decompaction / urban soil health practices? (reach out to John Voorhees)
- Development plan would need to specify a certain practice (decompaction with practice X to a depth of X, compost inclusion, etc.) for a specified area
- Process question - developer handoff to builder? Or in this instance the developer handles building/construction, so it's a clearer process.

- Criteria that account for within profile variability in soil texture gets much more complicated.
- Suggestion to shelve the development pathway and focus on the existing green space pathway given the existing complications with the development approach.
- If the WinSLAM model is problematic, will we run into the same issue with revitalization
- Construction pathway, on a back burner until Phil Gaebler conversation with Green Tier group and then the team can follow up.

2:00 Next steps & action items (15 min)

Action items:

1. Neal will look into NRCS slope infiltration research and share with the team
2. [Green roof guidance document](#) could be a good reference - Phil Gaebler will share with this document with the group (see reference materials in shared folder for pdf)
3. Wetlands could be excluded as well – these excluded areas could be included in the ‘areas where this practice cannot be applied’ section
4. Utility could be added to glossary (what’s included, how to determine utility conflicts)
5. Curve number table will be incorporated for discussion
6. Can WinSLAM model be adjusted to more accurately reflect compaction in construction-effected sites? Thus a benefit could be better attributed to decompaction / urban soil health practices? (reach out to John Voorhees)
7. Follow-up research question – compaction and infiltration benefit of natives versus turf in urban areas? (Wepking; et al, homework!)

Zoom connection info:

Join Zoom Meeting

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

Meeting ID: 838 9768 8109

Passcode: 072287