WISCONSIN STANDARDS OVERSIGHT COUNCIL

Standards Oversight Council (SOC)
Developing effective technical standards that protect Wisconsin's natural resources

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NRCS Stream Restoration Standards Team
MEETING NOTES

Friday, August 21, 2020 ▲ 9:00am – 12:45 pm ▲
Online meeting

9:00 **Welcome & Notes Approval** (Kate, Team)
Goal: Welcome, attendance, meeting goals, approve 7/28/20 draft meeting notes.

Confirmation of attendance:

Attendance: Kate, Steve, Bob, Seth, Jeff H, Nate, Mike, Joe, Ken, Marty

Absent: Faith, Bart, Stacy, Jeff S, Ben

Meeting goal: clarify any further issues with the edits from breakout groups and get team input.

Before we start, remind team (and Steve) that this is a collaborative process and we'd like to build consensus for the edits so please chime in when you have something to add or you feel should be adjusted.

We have to follow national standard format but we want to get full team input.
After today – get a solid draft from each group with the redline supplements and other changes to the national standards.

A draft of the 7/28/20 Meeting Notes was emailed to the team for review. There were no team comments or questions via email or in this meeting, so Kate will finalize and post these notes publicly on our team website within a week.

Breakout Group Report (Nate and Jeff H)
Goal: 20 min review of redline text for Stream Habitat Improvement (395) standard; 10 min Q&A

This group has merged the previously presented table and the issues the team identified into the Code 395 standard text. Their table can't be an attachment to the standard so they will work in those concepts to the standard text.

In Condition Where Practice Applies, there could be clarification on when a project is part of stream restoration vs when it's just habitat project. The standard isn't to identify minimum quantity of

habitat, for instance. A habitat that qualifies for 395 requires use of other standards (like 580 project). Sometimes habitat is more of a side-effect (like a rock weir for grade control) than the purpose.

Design of these practices should be looking at potential negative impact upstream. A reminder, especially for newer designers, would be helpful in the **Considerations** section.

We wouldn't want to require following another standard (e.g., 584) for ALL structures so there needs to maintain flexibility. Someone with job approval credentials has to sign off on a project so there is oversight.

Some language may be tweaked for options in different areas of the state (Driftless area vs rest of the state)

For all breakout groups: polish up your edits on the standard and submit to Kate and Steve. **Steve** will then review and adjust for a final draft written using all the NRCS restrictions. **Steve** will then circulate the revised version for full team review to make sure intent is captured—we'll discuss at the next meeting.

Breakout Group Report (Ken and Seth)

Goal: 20 min review of redline text for Channel Bed Stabilization (584) standard; 10 min Q&A

Their big issues of updates:

- Defining simple vs "complex" sites
  - What are triggers to kick over design to 582 additional requirements?
  - Some thoughts on triggers for natural streams:
    - Min. watershed size 5 square miles
    - Both streambed and shape (e.g bankfull flow >100 CFS)
  - Condition where practice applies could be a trigger detail equation, like Overfall height / bedslope x number structures > 100' per ¼ mile
  - Not for fish habitat
    - Overfall <6 inches
    - No more than 3 per ¼ mile
- Design requirements

Low-profile log weirs, cross vanes, and vortex weirs could be designed and installed as habitat structures under CPS 395, if they do not have a significant effect on sediment transport or bankfull discharge elevation. At some point, these structures significantly affect stream morphology and become a high risk for failure without meeting the criteria and considerations specified in CPS 584.

Under state and federal cost share programs, the liability in the event of a failure comes back to them with additional work at agency cost. As such, there needs to be effective minimum design criteria.

Breakout Group Report (Marty, Stacy, Ben)

Goal: 20 min review of redline text for Additional Criteria for Stream Restoration; 10 min Q&A

This group has been busy with field work and other priorities so there has been little change from the last presentation. They will be working on their text between meetings and we'll hear more from them at the next meeting.

Breakout Group Report (Bart and Faith)

Goal: 20 min review of redline text for Open Channel (582) standard; 10 min Q&A

This group has also been busy with field work and other priorities so there has been little change from the last presentation. They will be working on their text between meetings and we'll hear more from them at the next meeting.

Breakout Group Report (Jeff and Joe)

Goal: 20 min review of redline text for laws & regs; 10 min Q&A

They previously presented a detailed list of rules and regs. Based on previous team discussions, they dialed it back to less detail.

The additional text regarding the regulations will now be a summary of **Who** you need to contact and **When**. They present a list of ideas on-screen for team discussion. It's still a little more than what NRCS normally has, but a good amount of information to direct the user where they should go for permits, and the justification.

This group still has the full, comprehensive list of rules and regs which the team can use for our internal reference—it's good material!

Breakout Group Report (Mike and Bob)

Goal: 20 min review of redline text for Streambank and Shoreline Protection (580); 10 min Q&A

Old state standard had national and state criteria merged tougher, but that's not how NRCS allows it with their current formatting restrictions. They started with new approach and added state requirements separately and kept national language.

Some key points from this group's presentation and team discussion:

- Condition Where Practice Applies – added NRCS policy language which states this standard does NOT apply to erosion problems on open coastal shorelines of great lakes or in streams with watersheds greater than 250,000 acres (e.g. Mississippi River, Lake Michigan).
- Added criteria for a management assessment with the landowner to confirm purpose of the practice, and address ability and willingness of the landowner to carry out maintenance.
- Added language to increase riprap thickness to 3xD50 as an option (along with geotextile, filters or bedding).
- Critical area planting – they want to add a min. slope requirement for vegetated surface. For comparability, 3:1 slope is in 342 standard—that slope will be added as a minimum, with

some wiggle-room language for those rare exception situations (like a property line or a road).

- Vegetation management – team discussed that this could be an opportunity for better overall vegetation or a buffer.
- Added in detailed Criteria list on things like hydrology, stream geometry, waterway designations, stability.
- The details for stream classification on larger/longer projects will adjusted. Team doesn't want to over-prescribe Rosgen but on some projects geomorphic review is appropriate.
- Bank protection should be evaluated at flows equivalent to the 100-year flood or highest active floodplain bench.
- Changed language for riprap sloped 2:1 (rather than 1.5:1, which was in previous state standard).
- Added references to other standards, like livestock crossing, fish habitat improvement, channel bed stabilization, and modifications for channel cross-section dimensions.
- Team discussed whether we should cite a rock specification (Spec 9). It hasn't been in the past but rock quality is important for success. Specs list would be a long list if we get to thinking about other possible inclusions.
- Shoreline site assessment criteria – abbreviated list in current standard. He's aware there is a variation in NRCS design spreadsheet and DNR's permit requirements so he'd like feedback to get consistency.

Next Meeting Topics and Plan of Action (Kate, Steve)

Goal: Identify goals for next meeting. Review Action Items.

Action Items:

- **Each breakout group** will polish up their work on the standard and send to Steve by September 3, 2020. **Steve** will review and adjust for a final draft written using all the NRCS restrictions. **Steve** will then circulate the revised version for full team review to make sure intent is captured.
- Kate: finalize 7/27 notes and post online.
- Kate: prepare 8/21 draft meeting notes, Steve reviews, then full Team reviews.
- Kate and Steve: prepare agenda for next meeting on Sept 15, 2020.

Parking Lot for future team discussion (includes issues from previous meetings):

1. 582
   a. Possible issues with encouraging a meandering stream: Not all landowners are amenable, especially if they are losing cropland. Permitting would also need to be on-board with straight-to-meandering type of channel adjustment.
   b. What happened to the national reference to the 1 square mile drainage area in the Wisconsin standard? Can we could change this from National to Wisconsin standard?
2. 584
   a. For floodplain wide weirs, is this a problem to include in a "channel" specific standard?
   b. Raising stage seems to cause a problem in permitting which has a requirement of not raising the 100 yr stage (might be simplifying this).

   c. Is there precedent in other states that use Channel Bed Stabilization for natural streams? If so, we could use their language as an example.
3. Multiple stds
   a. Definitions and applications of different factors: OHWM, bankfull discharge, effective flow, channel-forming flow (relative to 580 and 582 at min.)
   b. as built and aged definitions,
   c. can meander belt width be worked into the terminology for resource concern (Fluvial Erosion Hazard).
   d. With regard to assessments: Should the standard require a Rosgen (or other) classification? Should we require a description or classification of the evolutionary stage?
   e. There's an important place for soil borings in the restoration standard. Reasons = 1) the variable glacial deposits that we have in the state and that they really define the alluvial channels, 2) potential bed material load contributions that affect the channel geometry, 3) gw/sw interactions in the springfed channels, importance of baseflow/water table that comes from the soil boring data. Think beyond bank stability but vertical/bed contributions and larger setting. Some of this is in the surficial geology section at the existing conditions assessment. Need a bit more of a geological influence -- not just engineering perspective. The standards would ensure some minimum requirement and the professional engineer stamping the design would make professional judgement. Standard could establish when needed/appropriate, where to bore? and how deep?
   f. Hydrology analyses - look at mapping tools that help set the hydrologic setting and design flows for ungaged streams. There is a lot going on here that may help standardize the approach -- USGS Streamstats tool at https://streamstats.usgs.gov/ss/ Does this mapping tool fit into a standard?
   g. Should look at the "risk" and the amount of risk that would govern what detailed analysis needs to be done. We have hundreds of miles that are stable from work that has been done in the past (without all this detailed analysis), but we do have high risk areas in upper watersheds and where some of our work hasn't held up.

12:00 End