

## **Construction & USLE Standard Team Meeting - AGENDA - Notes**

**Tuesday 07 July 2026 ▲ 9:00am – 2:30pm ▲**  
**Dane County Extension Building - Fen Oak Drive - Madison WI**

**VIRTUAL via [Zoom](#)**

**9:00 Welcome & overview of the goals of the day** (Amy, Sam, Team; 10 min)

**Attendance:** Amy Minser, Samantha Whitens, Jeremy Ashauer, Benton Stelzel [ad hoc member], Mike Hackel, Phil Purpuro, Brent Jalonen, Jeremy Balousek, Lance Newman, Tony Vandermuss, Carl Wepking

**Guests:** Briar Ward (Intern – Dane County Land and Water Resources), Pete Wood (invited, WDNR)  
**Absent:** Tim Troester

**9:10 Contractor Context-Design-Build** (Mike Hackel 25 min)  
**Goal:** Understand the timing and constraints around phasing/scheduling for design-build and similar project delivery approaches.

**Notes:**

- Shared ppt file (see shared folder)
- Issues that are considered
  - Cut & fill areas (i.e. consider source of fill in addition to placement of fill so material is not moved twice)
  - Phasing
  - Avoiding cut and fill work initially if there will be buried work (i.e. utilities) in an area – avoid filling and then digging through fill to accomplish utility work
  - Borrow-pits – areas where granular material can be sourced to replace unsuitable soils elsewhere
- Designed build project – does this introduce additional factors?
  - The earlier the better for involvement from a contractor perspective
  - Typically bid at 30% drawings
- Probably <25% of work is where the contractor is involved from planning through execution of the project. More typical to have planning completed by one party, and the work completed by another.
- Ideally, planning phase would involve everyone involved
- Major challenge – a lot of these problems are not ‘standard’ related, but process related.
- Challenges related to best practice (areas with 10% slopes, 25’ breaks – to execute this would be extremely costly. Instead it is better to leave steep areas until they can be addressed fully in a couple of days up to a week.

**9:35 Contractor Context-Design-Bid-Build** (Phil Purpero; 25 min)  
**Goal:** Understand the timing and discussions around phasing/scheduling for design-build and similar project delivery approaches.

**Notes:**

- Not typically involved in design of the projects that are involved in
- Low hanging fruit – contractors do not consider USLE, so this standard could help address this limitation and shine a spotlight on aspects of a project that could be the most problematic
- Balance regions – need access to cut areas to have access to fill areas in order to ready areas for actual construction (going vertical)
- Critical path is building construction—they need to fill building pad first
  - Balance regions are often missed in the design phase
- Design engineer – what are the top couple of items you'd like to emphasize
  - Balance regions
  - Considering a site from a soil perspective – soil pits are more informative than soil borings, and understanding a site from a soil perspective
  - Connect schedule with the state of the site (i.e. during a given phase some parts of the site could be at planned grade, and some could be at the 'before' grade)
- Disconnect between the people completing the USLE prep, and the people doing the work
- For active construction phases – handling of stockpiled soils – boilerplate language is typically used (i.e. stockpiled soils need to be protected) and often skimmed over/ignored.
- Other language used: controls shown are minimum acceptable (designer's 'get-out-of-jail-free' card)
- Slope interruption conflicts with work—doing work in 25' segments not feasible
- There is tension between limiting sediment discharge and working efficiently
- Best case is draft schedule-permit-bid-revised schedule
  
- How should this information be relayed, as process considerations are somewhat outside the bounds of a typical tech standard?
  - Plan and Specifications
  - Operation and Maintenance
  - Considerations?
  - Appendix?
  
- DOT perspective
  - Schedules are very basic, contractors change them almost all of the time
  - Want to give contractors flexibility
  - Lean on erosion control matrices
  - Struggles with implementability
  - From a contractor perspective – working with DOT is more straightforward in that you're paid for the specific activity that is accomplished rather than having all of erosion and sediment control under a single lump sum item.
  - Mostly prescriptive compliance
  - Select sites (borrow, waste, contractor yards) is where USLE most applicable
  
- Planning for 3 phases?
  - Beginning - initial
  - Middle - mid-construction
  - End- final planned state

- [Modified Sloper Erosion Control Matrix](#) – WIS DOT

10:00 Break (15 min)

10:15 Soil Loss, Sediment Discharge, Dane County, and Schedule Enforcement (Jeremy Balousek; 45 min)  
Goal: Take a deeper dive into the Universal Soil Loss Equation and talk about how Dane County implements the spreadsheet and enforces schedules included in the spreadsheet.

## Notes

- Shared ppt file (see shared folder)
- USLE spreadsheet originated around 30 years ago
- Originally intended for ag settings
- Soil detachment and transport from precipitation
- Initial approach – storm water manual from DNR (“blue book”) – not performance based
- Initial target – 7.5 tons/acre/year (informed by TSS goals/targets)
  - USLE calculates movement, not loss
  - Approx. 80% reduction in loss for silt loam-best technical option is sedimentation pond
  - State uses 5 tons/acre/year, but this is *discharge* (not movement)
  - This is about 5 sheets of paper in depth of soil
  - Applies to sheet and rill erosion-if you can’t drive over it with farm machinery, it is not a rill, it is a gully
- Factors involved in the equation
  - R - rain energy
    - Developed in 60’s
    - 150 in Dane Co
    - Higher to southeastern Wisconsin
    - Lower to the north
    - Assumes all precipitation is rain (liquid)
    - How is the R factor updated
      - Updated in RUSLE2 - (engaging someone from NRCS to share the current status of RUSLE2 – Jamie Patton?)
  - K - erodibility factor
    - Based on soil type
    - Soil erodibility in bare condition-no vegetation
    - Often top soil is stripped, so this is accounted for in the model (subsoil or lower soil horizon is used)
    - Often subsoil more erodible
  - LS - slope length factor
    - Longer, steeper slope increase erosiveness
  - C - cover and management
    - Amount of cover versus bare soil
    - Gives credit for erosion management tools
- Agreement between soil loss calculations and sediment discharge calculations – RUSLE2
- Additional notes on underlying calculations
  - RUSLE2 now includes a daily R factor
  - Convex vs concave slopes
  - Deposition accounted for

- Practices that can change the outcome
  - Silt fence
  - Diversions and avoidance
  - Slope interruption
  - Other designed practices
- Incentive to not disturb areas that don't need disturbance
- Importance of using the right tool for the job (SLAMM and P-8 are not suitable for construction erosion management, and USLE is not suitable for post-construction issues)
- True erosion control – best is to not have soil displaced to begin with
  - Mulching – soil is not disturbed by rain if covered by mulch
  - Polymers
  - Chipping waste lumber from home construction (not treated)
  - Compost spreading
- Assumptions that practices are implemented correctly
- Officially effective up to 33% but 'blows up' above 20%
- It would be helpful to have USDA present on updates to RUSLE2
- Have R factors been updated?
  
- Question for contractors – what types of things strongly affect scheduling
  - Weather
  - Other subcontractor or general contractor schedules
  - Vegetation timing & establishment-in or out of growing season
  - Timing of lot/home sales
  - Lack of communication between the owner and the contractor
- Dane County terminates permit based on end date in USLE spreadsheet-dates have been enforced for 20+ years
  - Automated email to landowner 7 days prior to expiration
  - USLE dates can be updated and submitted as an amendment via email during the permit term, most projects have at least one update
  - If permit expires per most recent USLE submittal before construction is completed, then an after the fact permit application is required to re-establish permit coverage
  - Dane County permits about 500 construction sites per year, inspects weekly within urban area and every 30 days outside of the urban area.
  - No additional requirements for winter construction but the practices used do change

## 11:00 Other State's Approaches (Brent Jalonon; 30 min)

**Goal: Identify different approaches to implementing a sediment discharge limit**

### Notes

- Information gathered is available to the team in the shared resources folder
- AECOM memo for DOT summarizing what other state DOTs do
- Most states use RUSLE2 or USLE
- Essentially some states have a unique interface that relies on RUSLE2
- The focus is on erosion control and sediment control is rarely considered
- Review of existing resources

- RUSLE2 is missing parameter files for construction practices (as RUSLE2 is agriculturally focused)
- Some states use lookup tables

## 11:30 Discuss Possible Approaches (Amy Minser; 30 min)

**Goal: A list of possible approaches and their pros and cons**

### Notes

- Possible Approaches
  - USLE
  - RUSLE 2
  - Slope-based threshold
  - Rv factor
  - Lookup tables
  - Prescriptive compliance
- What's the goal of what we're trying to build?
  - No more than 5 tons / acre / year of sediment discharge is a performance standard—need means of documenting compliance
  - Shifting guidance to something closer to a requirement
  - NOI (notice of intent) tool OR “enforcement” or regulation type tool?
  - If used during permit application it is a planning tool, but what occurs in the field can be different
  - At the end of the day, the goal is improving or optimizing performance
  - Whether a consultant is involved in the planning seems to be a determining factor
  - Most contractors would not update the USLE
  - DOT has a big separation between design and construction
  - Counties use templates for more typical practices such as culvert, ditch work but a full plan is done for full roadway reconstruction
  - On DOT projects, Select sites are entirely under contractor control

## 12:00 *Lunch, provided* (30 min)

## 12:30 Panel Discussion-Sediment Discharge During Review and Inspection (Pete Wood, Samantha W., Eric Rortved; 60 min)

**Goal: Discuss how WDNR is currently implementing sediment discharge**

### Notes

- Pete was the original driver of the guidance document
- No relationship between contractors & DNR
- Spreadsheet is largely a planning tool
- Issues
  - ‘Going through the motions’ now-current use is more of checking a box
  - Filling out spreadsheet without consulting with the guidance document
  - Missing map to show ID of flow-paths
  - One spreadsheet to represent an entire construction site
    - Often showing only the worst case scenario
    - End up with unrealistic schedule

- Plan updates happen, but not updated soil loss calculations
- Suggestion to break up a construction site into multiple USLEs based on slopes – at least two.
- For Dane Co final stabilization is the end date for the permit – therefore new USLEs are submitted more commonly
- Advice – target:
  - Easy
  - Realistic
  - Doable
- Glossary fodder
  - Potential for terminology confusion, particularly phasing, sequence, etc.
  - Follow-up with terms that are potentially misconstrued between stakeholders
- Spreadsheet as planning tool
- Conversation-based interactions are often more effective than review with planning engineer
- DOT has been postponing implementation because they need to simplify and do training of both staff and contractors—currently focused on prescriptive compliance, implementation varies by region—need management backing to get consistent use  
Could keep current approach and focus on bridging the gap between design and construction  
Continue focus on sheet and rill erosion, focus on preventing gully and channel erosion
- Prescriptive approach to sites of a certain size
  - Or table approach
  - Examples
    - Criteria for sites with slopes 1% or less
    - Criteria for sites with X type of soil
    - Sites of a certain acreage (small, medium, large?)
      - This is good for small projects, but problems still persist for the medium and large sites (disconnection between planning and implementation)
  - Idea - second submission of documentation/plan once contractor is established and consulted with (initial planning submission)
  - Focus on high-leverage triggers
    - Risk levels?
    - Slopes?

**1:30 Accounting for non-sheet flow sources (Amy Minser; 45 min)**

**Goal: Discuss sediment sources that are outside of the USLE framework of sheet and rill erosion**

**Notes:**

- Items to consider
  - Dewatering
  - Steep slopes
  - Channelized flow
- Hard to quantify, and hopefully avoided with other practices
- Will continue to consider options here

**2:15 What's next** (Amy, Sam, Carl; 15 min)

**Goal: Identify action items**

**Action items & homework:**

- See highlighted sections above
- Jeremy Ashauer - sediment control performance data
  
- Potentially focus on RUSLE2 aspects - Jamie Patton
  - Is it still supported?
  - Who supports it? (seemingly NRCS)
  - Are there updated input files?
  - Last updated in 2022
  - NRCS holds the master database
  - What updates have been made over the years?
  - Are there updated inputs for climate change?
- Review other state's approaches – team homework
- How can the items contractors brought up be considered in developing schedules, standard implementation?
  
- Revisit process discussion? (end of meeting conversation)

**Late item for conversation**

- Require site-work contractor to sign-off
  - Drawback – lengthens the time it takes to start work
  - Does the positive outweigh the negative?
- Two step-process-Amy to discuss openness to this idea with her supervisor
- Approve work, but don't grant permit until updated documentation has been submitted
  - Allows time for all stakeholders to provide input and consultation
- 

**2:30 End**

**Draft Schedule [updated 11 June 2026]**

| <b>Date</b>              | <b>Focus</b>                                                                      | <b>Meeting Format</b>                                                                         |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>June 11, 2026</b>     | <b>Kickoff, problem definition, goal setting, brainstorming, identify options</b> | <b>In Person</b>                                                                              |
| <b>July 7, 2026</b>      | <b>Presentations, discuss options, identify additional information needs</b>      | <b>In person</b>                                                                              |
| <b>August 6, 2026</b>    | <b>Presentations/discussions/outline criteria</b>                                 |                                                                                               |
| <b>September 3, 2026</b> | <b>Brainstorming/outline criteria</b>                                             |                                                                                               |
| <b>October 1, 2026</b>   | <b>Discuss new sections</b>                                                       |                                                                                               |
| <b>November 5, 2026</b>  | <b>Discuss new sections</b>                                                       |                                                                                               |
| <b>December 3, 2026</b>  | <b>Team review/discussion, select initial reviewers</b>                           |                                                                                               |
| <b>December 10, 2026</b> | <b>Send for internal/initial review</b>                                           | <b>N/A-process step</b>                                                                       |
| <b>January 7, 2027</b>   | <b>Address initial review comments</b>                                            | <b>Note: May need to reschedule or cancel to allow more time to process comments received</b> |
| <b>February 4, 2027</b>  | <b>Finalize draft for public comment</b>                                          |                                                                                               |
| <b>March 4, 2027</b>     | <b>DNR request permission to post for public review</b>                           | <b>N/A-process step</b>                                                                       |
| <b>April 1, 2027</b>     | <b>Post for public comment</b>                                                    | <b>N/A-process step</b>                                                                       |
| <b>May 6, 2027</b>       | <b>Respond to public comments</b>                                                 | <b>Note: May need to reschedule or cancel to allow more time to process comments received</b> |
| <b>June 3, 2027</b>      | <b>Review final draft</b>                                                         |                                                                                               |
| <b>July 2027</b>         | <b>Request permission to finalize/Publish final technical standard</b>            | <b>N/A-process step</b>                                                                       |
| <b>August 2027</b>       | <b>Webinar</b>                                                                    | <b>Virtual</b>                                                                                |